The Croonian Lectures

ON

SOME POINTS CONNECTED WITH SLEEP, SLEEPLESSNESS, AND HYPNOTICS.

Delivered before the Royal College of Physicians of London on June 20th, 22nd, 27th, and 29th, 1899,

BY JOHN BUCKLEY BRADBURY, M.D. CANTAB.,

FELLOW OF THE COLLEGE; DOWNING PROFESSOR OF MEDICINE IN THE UNIVERSITY OF CAMBRIDGE; AND SENIOR PHYSICIAN TO ADDENBROOKE'S HOSPITAL.

LECTURE III.[1]

Delivered on June 27th, 1899.

MR. PRESIDENT AND GENTLEMEN,—The most important of the other derivatives of chloral is chloralose—a substance first prepared by Heffter and introduced into therapeutics by Hanriot and Richet. It is a substance about which there is much that is deeply interesting. Like chloral hydrate it induces sleep, but instead of depressing reflex activity it markedly increases it. Its toxicity is also greater than that of chloral hydrate, and this is perhaps the most interesting point connected with it. Why a combination of chloral with an inert sugar molecule should so greatly increase its toxic action and modify its effects it is difficult to understand. It may be that the combination presents the chloral molecule to the tissues in a more readily assimilable condition, but this we are not certain of. We do know that chloral combines with glucose and the product thus formed is oxidised in the system to urochloralic acid and this on hydrolysis yields glycuronic acid.

It is mainly to Richet and his pupils that we are indebted for our knowledge of the pharmacology of chloralose. They have chiefly experimented upon dogs. In these animals there is marked preliminary excitement followed by sleep, the muscles retain their tone, and there are increased reflexes, especially to sound; the animal takes up peculiar positions which are half cataleptic, and if the table be hit convulsive movements are obtained. Pain is said to be abolished. The respiratory movements become spasmodic and irregular and finally cease, but the heart is scarcely affected and the blood-pressure is said to be raised above the normal. If artificial respiration be maintained the heart will go on beating some time and comparatively large doses have to be given before it is paralysed. A kind of periodic respiration is described as occurring before death, but the significance of this we do not quite know. In the early stage of its action a peculiar psychical blindness is mentioned by Richet as occurring just as when the angular gyrus (*pli courbe*) on both sides of the brain is extirpated. He believes that the action of the drug is primarily upon the grey matter of the cerebrum, as he found that after its administration the subjacent white matter was more sensitive to stimuli than the cortex, a condition the reverse of the normal. In man the drug is said to produce refreshing sleep without ill effects. The heart and alimentary system are not affected; in fact, the blood-pressure is raised and the appetite is stimulated. Muscular twitchings may occur and in some cases even convulsions have been noticed, but Richet thinks that the cases of so-called poisoning are misnamed, and according to him the recorded dangers are in reality advantages, as they show the activity of the medullary and spinal centres. The effect of chloralose in fact, he says, is best expressed by the statement that the brain is asleep and the spinal cord awake, and even excited. The comparative toxicity of chloralose in dogs, cats, and birds per kilogramme body-weight when given by the mouth is as follows:—

	Dogs.	Cats.	Birds.
Minimum active dose	0·15 gramme	0·005 gramme	0·01 gramme
Hypnotic dose	0·25 gramme	0·02 gramme	0·015 gramme
Lethal dose	0·6 gramme	0·1 gramme	0·05 gramme

[1] Lectures I. and II. were published in THE LANCET of June 24th and July 1st, 1899, respectively.

It will be noticed that cats are extremely sensitive to this drug, but they are also sensitive to chloral and chloroform. My experiments have been made chiefly on rabbits. They react readily to the synthetic hypnotics, the sleep is not preceded by any excitement, they can be kept more under observation, and altogether they are better adapted for comparative investigations than are dogs or cats. In rabbits the same symptoms are seen as in dogs, with the exception of the preliminary excitement—i.e., cerebral depression follows in about half an hour, the animal on attempting to move rolls from side to side, and subsequently sleep occurs. But even then the reflexes are increased, the corneal reflex is distinct, and there may be nystagmus. Pain, however, is not abolished, as heavy pressure on the feet will produce marked reflexes where moderate pressure has no effect. The respiration is slowed and to a less degree the heart-beat also. The temperature falls from the first. A dose of one gramme per kilogramme kills in two and a half hours. Similar effects are produced in guinea-pigs and in rats.

An interesting point in connexion with chloralose, as with all chloral derivatives, is its effect on the circulation. According to Richet, in doses producing complete sleep, this is practically unaffected. If anything the blood-pressure is raised and provided that artificial respiration is maintained it is only after very large doses of the drug have been given that paralysis ensues. In the tracing I show you, however, chloralose distinctly lowered the blood-pressure (Fig. 11). It was taken from a dog to which small doses of chloral in various forms had previously been given (Fig. 7) and it shows the effect of an injection of 16 cubic centimetres of 1·25 per cent. in 20 per cent. of alcohol into the femoral vein. The blood-pressure is markedly lowered, the heart-beats are slowed, and respiration has ceased. The diminished frequency of the heart-beats in part accounts for the lowness of the pressure. The effect is even greater than a similar dose of chloral hydrate or chloralamide (vide Fig. 7 which shows the effect of these on the same dog subsequently), and that the influence is not due to the alcohol is shown in the succeeding tracing (Fig. 11) which was obtained by injecting the same amount of alcohol without chloralose under exactly similar conditions. When smaller doses were used the effect was less marked, but it still remained greater than with chloral hydrate—at least, when the doses administered were calculated as anhydrous chloral. This is, perhaps, unfair to the chloralose, as, owing to its greater molecular weight, twice as much of it must be administered as of chloral hydrate for the same amount of anhydrous chloral. But the effect is of interest as showing the influence of the chloral component. In a dog weighing 14,400 grammes the injection of five cubic centimetres of 1 per cent. of chloral (as chloralose) in 20 per cent. of alcohol produced slight increase in the respiratory movements, slight dilatation of the vessels, and increased cardiac action. The blood-pressure fell very little, owing probably to the compensating increase in the force of the heart-beat. The same dose of chloral as hydrate produced no action whatever. When double the above doses were used the difference in effect of the two substances was still better shown, the excursion of the stilet after the chloralose solution increasing to a marked degree; after the chloral hydrate solution scarcely at all. The mean blood-pressure after the injection of the chloralose was unaffected; after the chloral hydrate it fell to some extent. When, however, chloralose was used as the anæsthetic the influence on blood-pressure at the onset of anæsthesia was found to be less than with chloral hydrate. This is seen in Fig. 12. To a rabbit weighing 1820 grammes 0·96 gramme of chloralose (0·5 gramme per kilogramme body-weight) suspended in water was injected through a catheter into the stomach. An hour afterwards the animal was laid on its side, but it was not ready for operation for 50 minutes more. When the blood-pressure was first taken (two hours after the drug had been given) it was moderately high, but it rapidly fell. In similar experiments on dogs Richet found no lowering of blood-pressure when the animal was sufficiently anæsthetised to be operated on. The fall in my case may have been due to an excessive dose, but against this view is the fact that the animal was operated on as soon as it was thought to be "ready," the point of departure in all cases, and in reality the time of greatest practical importance. That chloralose depresses the circulation less—and considerably less—than chloral hydrate there can be no doubt, but owing to its greater toxicity I am unwilling to admit its harmlessness in

cases of heart disease, in which, as we know, chloral hydrate is strongly contra-indicated.

In the preparation of chloralose another body which has been termed "para-chloralose" is obtained. This is insoluble in water and, according to Richet, it is inactive. Mosso, on the contrary, states that it is very slightly active. I obtained a similar result. To a small rabbit weighing 710 grammes I gave 2·849 grammes of para-chloralose (four grammes per kilogramme) suspended in weak mucilage. Depression and a slight fall in temperature, pulse-rate, and respiration occurred, but no distinct hypnosis. Evidently this substance will be of no practical utility and from this point of view whether it exerts a slight action or not is beside the question.

Besides ordinary chloralose, or gluco-chloralose, other chloraloses exist, and these have recently been studied by Hanriot and Richet.[2] These are galacto-chloralose, arabino-chloralose, xylo-chloralose, and levulo-chloralose. Probably two modifications exist in each case, but they have only been isolated in the arabinose combination. As regards their physiological action arabino-chloralose, para-arabino-chloralose, and levulo-chloralose produce calm sleep without increased reflex activity, and pharmacologically they seem better adapted for therapeutic purposes than gluco-chloralose. They have not, however, been put upon the market and as far as I am aware have not been tried therapeutically. Xylo-chloralose is mainly convulsant and its hypnotic properties are but slightly marked. Galacto-chloralose possesses both hypnotic and convulsant actions, but these are not marked and only appear after comparatively large doses. Of the other chloral compounds which I have investigated meta-chloral is so insoluble as to be almost inactive, and chloral-alcoholate acts in every way like the hydrate and appears to possess no advantages over this compound except a slightly less toxicity, due in all probability to its being less rapidly absorbed. Chloralimide also seems to have no claims to therapeutic consideration. It has been but little investigated. In the case of a small rabbit (960 grammes) which received 2·9 grammes of this substance (three grammes per kilogramme) slight depression was noticed after an hour and subsequently sleepiness, but these symptoms were never very marked. There was a slight fall in the pulse-rate and a distinct fall in the respiratory frequency, but the temperature remained normal. Recovery was very slow. Three days after the experiment the animal was eating very little and distinct tremors were observed on standing. In another case in which a corresponding dose was given to a smaller animal (700 grammes) slight depression but no distinct sleepiness was observed. The animal died in the night. Post mortem the duodenum and upper part of the jejunum were found inflamed and a small amount of serous fluid was found in the peritoneal cavity. Chloral-camphor, a well-known external remedy for neuralgia, probably owing to its slower absorption, is less toxic to rabbits than chloral itself, even when the dose is calculated as anhydrous chloral. In man a drachm produced very severe symptoms. It is markedly irritant and possesses no claims to consideration as an internal remedy.

Chloral has also been combined with other bodies—antipyrine, urethane, &c.—and these I shall consider presently. The most recent introduction is a combination of amylene hydrate and chloral to which the name of amylene-chloral has been given. According to Fuchs and Koch[3] it is a good narcotic and possesses no untoward effects. Butyl-chloral hydrate, the old croton chloral, is, as Liebreich stated, an intensified chloral. It corresponds very well in its effects to what we should expect from its chemical relation to ordinary chloral. It is more toxic, more hypnotic, and more depressant to the circulation, but it is much less soluble, and this fact must be remembered in comparing the effects of the two drugs. The bromo-derivatives will not detain us long. Speaking generally, they are less soluble and more toxic than the corresponding chloro-compounds and they are more depressant to the circulation. None of the organic bromo-compounds seem likely to prove useful as hypnotics. Bromal hydrate ($CBr_3CHO.H_2O$), the bromo-compound corresponding to chloral hydrate, is decidedly irritant and rapidly produces toxic symptoms. Thus in a frog while one centigramme of chloral hydrate injected into a lymph sac was not always fatal within 24 hours a corresponding dose of bromal hydrate killed within two hours. Similarly in rabbits 0·5 gramme per kilogramme of chloral hydrate was non-toxic, but the same dose of bromal hydrate killed in less than three hours. The symptoms were marked weakness and heart failure. Post mortem, inflammation of the gastric mucous membrane was found. Bromoform ($CHBr_3$), the correlative of chloroform, is also extremely irritant. It has recently been used as a hypnotic, but it is mostly given in whooping-cough. Considering its toxicity and the ill effects it is liable to produce its use in medicine ought to be abandoned. Ethylene di-bromide ($C_2H_4Br_2$) is also unsuitable as a hypnotic. It is decidedly toxic and deaths are said to have resulted from its use, especially as an anæsthetic. It has been recommended by Donath in epilepsy. Being an organic compound it was thought that it would be easily broken up in the blood and the effect of the bromine more readily obtained. In a rabbit one gramme per kilogramme produced no obvious symptoms beyond slight depression and fall in the respiratory rate and temperature, but the animal died during the night. Bromaloses corresponding to chloraloses have been prepared, but they do not appear to have been investigated pharmacologically. They will probably prove of no therapeutic value. Bromalin (the ethyl ammonium bromide of hexamethyleneamine, $C_6H_{12}N_4C_2H_5Br$) has been employed as a hypnotic and a remedy for epilepsy. It contains comparatively little bromine and consequently is not very toxic. Four grammes per kilogramme produced in rabbits depression and slight sleepiness of a transient character.

In some cases the analgesics seem to act as hypnotics and an attempt has been made to increase this action by introducing bromine. Bromo-phenacetin ($C_6H_4Br.(OC_2H_5)NH\,COCH_3$) is a case in point. This substance is not, however, very active. Three grammes per kilogramme administered by the stomach tube to rabbits only produced slight depression, fall in the pulse, respiratory rate and temperature. A similar bromo-derivative of antipyrine exists, but this appears to be less efficient as a hypnotic than the phenacetin compound.

URETHANES.

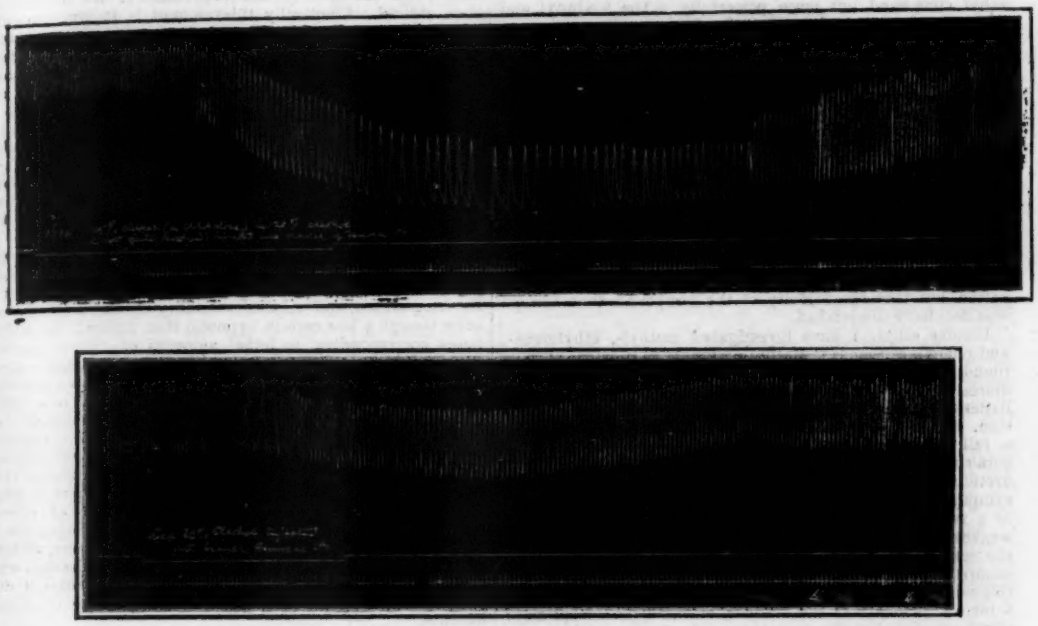
Somewhat more complicated in their molecule than the simple haloid hypnotics are the urethanes—$CO<\frac{NH_2}{O.R}$—one of which, ethyl urethane (ordinarily called "urethane") was introduced into therapeutics by Schmiedeberg in 1885. Schmiedeberg appears to have been led to its investigation by purely theoretical reasoning, for he says,[4] "it appears *à priori* probable that in them the hydrocarbon group of the fatty series retains the original character of its action, that further the group CO, as the radicle of carbonic acid, by the manner of its combination, will play no important part, and the group NH_2 as far as it possesses any influence must act in the same way as in the ammonia bases and affect the medullary centres." It was therefore only necessary to obtain an unirritating ester of carbamic acid $CO<\frac{NH_2}{OH}$ and this was found in the methyl and ethyl compounds. The propyl ester was not very soluble and the higher esters were almost insoluble in water. Schmiedeberg found ethyl urethane to be a decided hypnotic and in doses which produced sleep it had no depressing influence on the respiration or circulation, the blood-pressure was not lower than normal, and respiration appeared to be stimulated. This is due to the presence of the amide (NH_2) group.

Urethane possesses a slightly irritant effect and after large doses vomiting is induced in dogs. Generally, however, it produces calm sleep without ill-effects or after effects. Its action appears to be more certain in rabbits than in cats or dogs and, I may add, even than in men. With regard to its action upon blood-pressure I showed a tracing of its harmless effect when given by the stomach in my Bradshaw Lecture of 1895. I now add one showing its action when administered intravenously (Fig. 13). In this case it was found that the large dose of 3·5 grammes had to be injected into the veins of a rabbit (1660 grammes) before the animal was sufficiently under for operation, yet the blood-pressure was not less than its normal height and was maintained. Subsequently on injecting five cubic centimetres more of a 20 per cent. solution the blood-pressure fell rapidly, but no further fall followed this initial one. The respiration appeared to be scarcely influenced until

[2] Archives de Pharmacodynamie, tome iii., p. 191.
[3] Münchener Medicinische Wochenschrift, 1898, p. 37.
[4] Archiv für Experimentelle Pathologie und Pharmacologie, 1888, Band xx., p. 206.

FIG. 11.

EFFECT OF CHLORALOSE ON BLOOD-PRESSURE.



[*Dog weighing 9040 grammes, as before (vide Fig. 7 in* THE LANCET *of July 1st, p. 4). Lower tracing = effect of alcohol given without chloralose.*

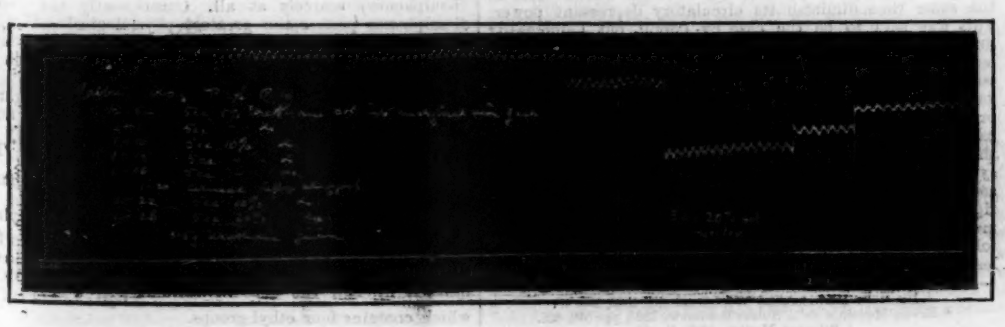
FIG. 12.

EFFECT OF CHLORALOSE ON BLOOD-PRESSURE.

Rabbit weighing 1320 grammes. (P. 150. R. 240. T. 34·7° C.) 11·57 : 0·36 gramme chloralose (= 0·25 gramme per kilogramme chloral) suspended in water injected into stomach. 12·57 : Laid on side : nystagmus. 1·25 : Operation commenced. 2·25 : Artificial respiration.

FIG. 13.

EFFECT OF URETHANE ON BLOOD PRESSURE WHEN INJECTED INTRAVENOUSLY.



late in the experiment. Another effect of urethane is a diuretic one; this appears to occur both in man and in animals. Of the other urethapes investigated by Schmiedeberg the propyl ester acted qualitatively like the ethyl compound but more powerfully. The iso-butyl and amyl esters were not investigated. They are, however, comparatively insoluble and are not likely to prove of use in practice. If an ethyl group is introduced into the *amide* radicle the compound produced reacts like ethyl-urethane, qualitatively and quantitively. According to Hübner and Stricker[6] methyl-urethane and ethylidene-urethane are without action. They believe that the influence of the amide group on the medullary centres is antagonistic to the hypnotic effect of the alkyl radicles and if the drugs are given in large doses may even annul it. Later Binet[7] has found both methyl- and ethylidene-urethanes active, the latter being the more active of the two. Methyl-urethane was much less active than ethyl-urethane. This author also found that a hydrogen of the amide group could be replaced by acetyl (C_2H_3O) without changing the character of the action, but that the toxicity of the compound thus formed was decidedly diminished.

Besides ethyl, I have investigated methyl-, ethylidene-, and phenyl-urethanes. Methyl-urethane, as previous authors found, is very slightly active. The main effect appears to be diuresis. In frogs one centigramme produced very transient listlessness, and two grammes produced only slight depression, a slight fall in the pulse rate and respiration, and a fall of a few tenths of a degree Centigrade of temperature in a rabbit weighing 730 grammes. Ethylidene-urethane, $CH_3.CH(NH.CO_2C_2H_5)_2$, however, produced marked symptoms. 1·8 grammes suspended in mucilage and given to a rabbit weighing 720 grammes were followed by marked weakness, depression, and sleep. The pulse rate rose and the respiratory rate and temperature fell. No improvement occurred and the animal died in the early part of the following morning. Post mortem blood was found in the urine and petechiæ in the bladder, but with the exception of slight congestion of the upper part of the ileum no other gross lesion was seen. Phenyl-urethane ($C_6H_5NH.CO_2C_2H_5$) was also markedly active but the symptoms were more those of general paralysis than of sleep. A condition simulating catalepsy followed by paralysis, unconsciousness, and a marked fall in temperature (10·2° C. in two hours) were the chief symptoms after a dose of two grammes per kilogramme to a rabbit. The phenyl radicle is here the predominant factor, and whatever may subsequently be found with regard to the hypnotic effect of complicated aromatic derivatives, the simple radicles of this series cannot be used for this purpose. Although increased hypnosis may occur after the introduction of such a radicle this is more than counterbalanced by its increased toxicity. Thus, of the urethanes ethyl-urethane is the only one with any claims to therapeutic utility. Its action appears to be mainly dependent upon the ethyl group it contains, and this effect is again brought out in connexion with the sulphones which we shall notice presently. Quite recently Albanese has investigated the action of di-urethane placed at his disposal by Schmiedeberg. This substance ($NH(CO.OC_2H_5)_2$) contains two oxy-ethyl groups (OC_2H_5), and when administered in doses corresponding to its molecular weight is twice as hypnotic as urethane—an additional proof of the value of the ethyl radicle.

As urethane exerts little effect upon the circulation it was thought that a combination of chloral and urethane would maintain the hypnotic action of the former and at the same time diminish its circulatory depressant power. This was said to be the case by Poppi, but Langgaard finds it difficult to understand how the vessel-dilating action of a substance can be annulled by combination with another substance possessing no influence on the vaso-motor centre; and he finds that chloral-urethane—or "ural" ($CCl_3.CHOH.NH.CO_2C_2H_5$) as it is sometimes called—is less certain as a hypnotic than chloral and that it possesses the same action on the vaso-motor system. Its uncertain effect he attributes to its smaller solubility and slower absorption. In the main Langgaard is right, but I think he is wrong in ignoring the urethane molecule altogether. Theoretically, we might deduce the following conclusion. Assuming urethane to be four times less active than chloral the hypnotic effect of the urethane in the molecule as compared with the chloral must be nearly one-seventh $\left(\frac{89}{147{\cdot}5}\times\frac{1}{4}\right)$, that is, chloral-urethane should be one-seventh less depressant to the circulation than chloral. Practically this amount is insignificant and would not be of much value were it not combined with another and more important factor—viz., that of solubility. Chloral-urethane is but slightly soluble in cold water and readily in boiling. In the latter it is said to be broken up into its constituents, but I have only found this to be the case after prolonged heating. If a mixture of the substance and water be boiled solution results, unless an excess of the material has been added, and on cooling re-precipitation occurs. Furthermore, the solubility seems to be fairly constant for the same temperature, and if a slight excess of substance is used this does not quickly disappear on boiling, which would be the case if decomposition occurred with anything like rapidity. In therapeutics at least the supposed decomposition of this substance may be ignored. On account of its composition and smaller solubility chloral-urethane is a safer though a less certain hypnotic than chloral. In rabbits doses corresponding to lethal amounts of chloral produce little effect, but larger doses produce a marked action. Thus, to take a typical case, after 3·65 grammes suspended in mucilage had been injected into the stomach of a rabbit (1120 grammes) the animal rapidly became narcotised, the reflexes were almost lost, the pulse rate fell slightly, the respiratory rate markedly, and the temperature 5·4° C. After four hours slight improvement occurred, but even after six hours this was not marked. The next morning the animal was normal. Thus after a dose of chloral urethane corresponding to two grammes per kilogramme of anhydrous chloral—twice the toxic dose—recovery without apparent after effects occurred. During deep narcosis with this drug the blood-pressure is distinctly lowered, but this does not appear to be so marked as after the use of chloral hydrate.

SULPHONES.

Probably none of the more recently introduced hypnotics have excited so much interest as the sulphones. Of these three are on the market—sulphonal, trional, and tetronal. Chemically they may be regarded as methane in which all the hydrogens are replaced by alkyl and alkyl-sulphonic radicles. Thus, sulphonal (disulphone-ethyl-dimethyl-methane) is $CH_3 > C < \begin{matrix}SO_2.C_2H_5\\SO_2C_2H_5\end{matrix}$, in which two hydrogens of methane are replaced by two methyls and the two remaining hydrogens by two ethyl-sulphonic groups. In trional one of the two methyls of sulphonal is replaced by ethyl and in tetronal both methyls are so replaced.

$$\begin{matrix}CH_3\\C_2H_5\end{matrix} > C < \begin{matrix}SO_2.C_2H_5\\SO_2.C_2H_5\end{matrix} \qquad \begin{matrix}C_2H_5\\C_2H_5\end{matrix} > C < \begin{matrix}SO_2.C_2H_5\\SO_2C_2H_5\end{matrix}$$

The introduction of the two last drugs is due to the fact that the hypnotic influence of sulphonal appears to be dependent upon the ethyls it contains. This was determined by Baumann and Kast[9] after investigation of a large number of di-sulphones. These bodies may be divided into three series—(1) $CH_2(SO_2R)_2$—methylene di-sulphones; (2) $CHR'(SO_2R)_2$—methenyl di-sulphones; and (3) $CR'R''(SO_2R)_2$—ketone di-sulphones, where R., R', and R'' represent monatomic radicles. These substances react very differently in the body; the last (ketone di-sulphones) are almost wholly decomposed and the first (methylene di-sulphones) scarcely at all. Consequently the ketone-di-sulphones possess the greatest physiological action, the methylene di-sulphones being almost inactive. Between the two both in activity and liability to change within the organism stand the methenyl di-sulphones.

Of the di-sulphones which are decomposed in the organism Baumann and Kast have found that only those were active which contained ethyl groups and that the intensity was dependent on the number of these groups present. Thus sulphonal $\begin{matrix}CH_3\\CH_3\end{matrix} > C < \begin{matrix}SO_2.C_2H_5\\SO_2.C_2H_5\end{matrix}$ and "reversed" sulphonal $\begin{matrix}C_2H_5\\C_2H_5\end{matrix} > C < \begin{matrix}SO_2.CH_3\\SO_2.CH_3\end{matrix}$ in which the ethyls and methyls of sulphonal have changed places produce the same effect both qualitatively and quantitatively, and the same action is induced by half the dose of tetronal $\begin{matrix}C_2H_5\\C_2H_5\end{matrix} > C < \begin{matrix}SO_2C_2H_5\\SO_2C_2H_5\end{matrix}$ which contains four ethyl groups.

[6] Deutsche Medicinische Wochenschrift, 1886, No. 45.
[7] Revue Médicale de la Suisse Romande, 1893, pp. 549, 628.
[8] Riforma Medica, 1888, No. 81.
[9] Therapeutische Monatshefte, 1889, p. 515.
[9] Zeitschrift für physiologische Chemie, Band xiv., p. 52.

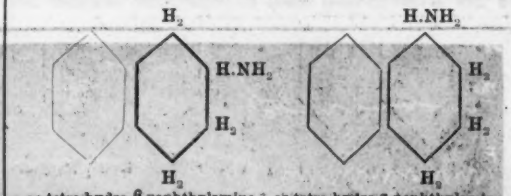
Di-methylsulphone-di-methyl-methane, on the other hand, although decomposed within the organism, is almost inactive. Furthermore, six grammes of a di-sulphone containing only one ethyl group—e.g., $C_2H_5 > C < \begin{matrix} SO_2CH_3 \\ SO_2CH_3 \end{matrix}$ or $\begin{matrix} C_2H_5 \\ CH_3 \end{matrix} > C < \begin{matrix} SO_2CH_3 \\ SO_2CH_3 \end{matrix}$—produced almost the same effects with the same duration as three grammes of sulphonal or other di-sulphone with two ethyl groups. From this it seems proved that the ethyl group is the active factor and that it is immaterial whether these groups are united directly to the carbon nucleus or through an intermediary sulphone linking. The sulphone group, in fact, does not, as such, come into consideration.

Baumann and Kast's experiments were made on dogs, but if we experiment on rabbits the order of activity is changed. Trional is the most potent, tetronal the next potent, and sulphonal the least potent. Evidently in certain cases we have some other active factor than change in mere chemical composition, and this, as I have noted in previous connexions, is change in physical properties. Trional has the lowest melting point of the three compounds and it is also the most soluble, and this is more than sufficient to counteract the increased hypnotic influence of an extra ethyl group in the case of tetronal. In dogs and men, owing to the more liquid gastric contents, more rapid absorption and greater susceptibility to hypnotic drugs, this difference in the solubility of the substances is not so apparent. If experiments are made with complete solutions the order of toxicity—sulphonal, trional, tetronal—is well brought out. Thus fish (minnows) die in about 24 hours when placed in sulphonal 1 in 1600, in trional 1 in 4000, or in tetronal 1 in 5000. It is worth while drawing attention to this marked toxicity of sulphones to fish, especially as compared with other hypnotics. Thus 1 in 500 of chloral is not fatal, and 1 in 1000 of urethane produces scarcely any effect. The symptoms also produced by chloral hydrate and the sulphones are different in their nature; the main symptom of the first is narcosis; that of the second is paralysis. This suggests that sulphones have some other effect than a purely hypnotic one and that they act on other organs of the body than the brain. This is the case. The prolonged administration of any of these compounds leads to serious conditions and that ill effects are not more frequently manifested after the use of single doses must be attributed to the insolubility of the substance.

Recently the mode of action and toxic effects of sulphones have been investigated by several observers. Vanderlinden and de Buck have put forward the view that the hypnotic action was due to a diminution in the alkalinity of the blood and a resulting accumulation of CO_2 combined with poverty of O in the nerve cells; but this view has been controverted by Mayser,[10] von Mering,[11] and Giessler.[12] Hoppe-Seyler and Ritter[13] believe that the essential feature of acute poisoning by these drugs is a destruction of red blood corpuscles and that this accounts for the siderosis of the liver, the excessive formation of bile, and the presence of urobilin in the urine. Fatty degeneration and sometimes necrosis occur in the heart, liver, kidneys, stomach, and intestines; and secondary symptoms—e.g., blood stasis in the organs from heart failure—also result. Death in warm-blooded animals is said to occur from broncho-pneumonia (aspiration pneumonia).

VEGETABLE HYPNOTICS.

Passing on now to the vegetable hypnotics it is not possible to deal with these on purely chemical lines. The active principles of some of them are unknown and even of those which are known we are imperfectly acquainted with their chemical constitution. Yet before a chemical classification is possible this must be completely determined. We are aware that many of them contain definite groups, and in the case of some we know the parent radicle, but the mode of combination of the various groups in these cases is still uncertain. From a pharmacological point of view this mode of combination is of importance, as drugs possessing the same empiric formula, and even in some cases similar constitutional formulæ, have very different pharmacological actions. Thus, Filehne found that the tetrahydronaphthylamines differed markedly in their action, according to the position of the amide group; alicyclic tetra-hydro-β-naphthylamine being a mydriatic and producing contraction of the vessels of the ear and other effects; the corresponding tetra-hydro-α-naphthalmines having no such action. Cash and Dunstan also found



ac.tetra-hydro-β-naphthylamine. ac.tetra-hydro-α-naphthylamine.

that tri-acetyl-benzoyl-aconine possessed a very different effect from that of di-acetyl-aconitine, although aconitine is acetyl-benzoyl-aconine; and numerous other examples might be given. Owing to this uncertainty regarding the composition of the active principles of plants, most of the pharmacological work in connexion with their chemical constitution has been done upon those outlying groups which we know to be present. Modifications of the original substance, such as by the introduction of simple radicles, have been submitted to pharmacological investigation and have given us interesting results, these being in some cases even of practical value. This will be seen presently.

As opium is by far the most important of the vegetable hypnotics that we possess I shall deal first with this substance. It has now been known for over 2000 years and during the whole of this time it has formed one of the staple ingredients of the materia medica. At one time or other it seems to have been used in every conceivable disease and condition, and although the result has not always been beneficial to the patient the knowledge which has been gained is of inestimable value to us at the present day. We might even go so far as to say that it is of paramount importance; that physiological investigation has added little to our knowledge of the therapeutic uses of opium. It has confirmed the knowledge which we had previously acquired in another and more undesirable way and it has given us a more rational basis for its employment in practice. The beginning of our scientific knowledge of opium only dates from the commencement of this century when Sertürner isolated morphine. This, the first alkaloid to be obtained, was found to possess similar effects to opium and on this account it aroused considerable interest. Pharmaceutical research was stimulated and soon a number of other alkaloids and principles were extracted from plants. Besides morphine other alkaloids were also obtained from opium and in time these were investigated pharmacologically. In this connexion Claude Bernard's name stands out pre-eminently. It was early found that all the alkaloids of opium were not possessed of similar effects. Some, such as morphine, produced cerebral depression; others, such as thebaine, excitement and convulsions. Thus within the same vegetable product were found substances possessing antagonistic actions. But further investigation proved that the two substances were not so antagonistic as was at first thought. Morphine was found to act differently on different animals—in the frog producing mainly convulsions and in some mammals excitement rather than depression. These mammals are said by Guinard, who has recently made an important contribution to this subject, to be the horse, ass, ox, cat, sheep, pig, and goat; the dog, rabbit, guinea-pig, white rat and mouse, on the other hand, are more or less depressed. Even in the same species of animals there is a considerable variation in the action of morphine, and men, who are most susceptible to its depressant effects, are sometimes markedly excited by it.

Comparatively recently Amblard and Grasset have returned to the question of the convulsant action of morphine, and from researches on animals with cut spinal cords have concluded that morphine and thebaine are not diametrically opposite in action and that the effect of morphine on frogs and mammals is not dissimilar. This was previously known, but these authors lay stress on the fact that the excito-motor action of opium is not exclusively dependent on the amount of so-called convulsant substances it contains, but it is also partly due to the morphine present. An amount of opium containing five centigrammes of morphine is more convulsant than the amount of thebaine (about one milligramme)

[10] Deutsche Medicinische Wochenschrift, 1896, p. 185.
[11] Therapeutische Monatshefte, 1896, p. 421.
[12] Dissertation. Halle, 1896.
[13] Münchener Medicinische Wochenschrift, 1897, pp. 355, 391.

FIG. 14 A.

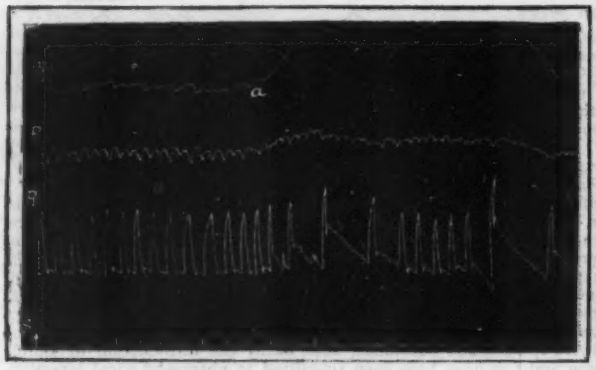


FIG. 14 B.

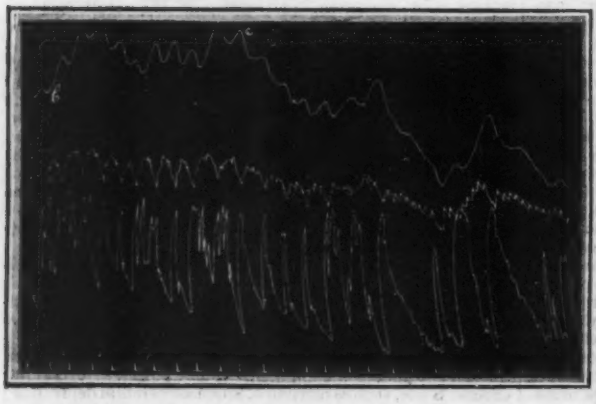


FIG. 14 C.

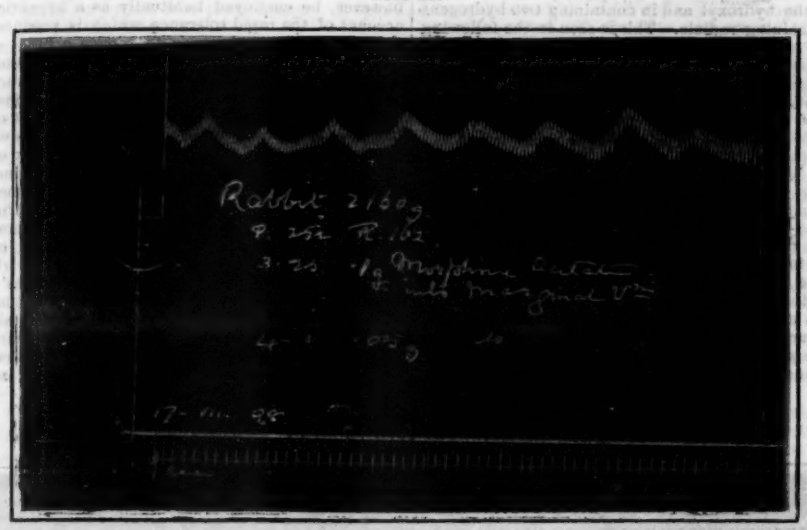
Effects of a venous injection of 8 centigrammes of morphine hydrochloride. The arrow on the line S, Tracing A, indicates the moment of injection. M, Blood-pressure. P, Pulse. R, Respiration. The three tracings, A, B, C, follow one another without interruption, one being the immediate continuation of the other. (Reduction one-third.

present. But whatever the effects in other animals, to man and the dog morphine is decidedly depressant and differs markedly in its action from thebaine. And according as the other alkaloids of opium approach nearer to one or other of these in action they may be classified. Claude Bernard commencing with the least convulsant obtained the following series: narceine, morphine, codeine, narcotine, papaverine, and thebaine. The order of toxicity he found was: narcotine, morphine, narceine, papaverine, codeine, and thebaine, the last-named being the most powerful. Schröder divides the alkaloids of opium into two groups: the morphine group containing morphine and oxydimorphine; and the codeine group containing papaverine, codeine, narcotine, and thebaine. Hydrocotarnine, laudanosine, and cryptopine also belong to this group, but our knowledge of their actions, Schröder says, is not sufficient to place them. Hans Meyer, in connexion with a research on other papaveracious alkaloids, has modified this classification. He divides them thus: 1. Morphine group, containing morphine, chelidonine, and α-homochelidonine. 2. Codeine group, containing papaverine, codeine, laudanosine, narcotine, hydrocotarnine, sanguinarine, thebaine, laudanine, and hydrastine. 3. Protopine group, containing protopine, β-homochelidonine, and cryptopine. Not one of these classifications seems to me satisfactory. Claude Bernard's classification has been criticised by many observers, mainly in connexion with the relative positions of morphine and narceine. The latter in men has not been found by the majority of observers to be more narcotic than the former, and in practice it has proved of little value. The position of papaverine in the two classifications also seems to me erroneous. In both it is given as a convulsant and in Bernard's as a marked convulsant. In my experiments the prominent symptom has been depression. In frogs spasmodic incoördinate movements may sometimes be obtained on stimulation for a short time after the administration of a lethal dose, but at no time is any tetanus or marked increased activity present. In rats 0·3 gramme per kilogramme produced muscular weakness, slowing of the pulse and respiration, but no tetanus or distinct narcosis; the symptoms lasted four hours and recovery occurred. Still larger and lethal doses failed to produce increased reflex excitability. In a guinea-pig 0·2 gramme (0·47 gramme per kilogramme) produced prostration and running movements of the limbs which lasted 30 seconds, but these often occur after the administration of alcohol and they cannot be regarded as certainly indicating a convulsant action. The animal died from paralysis of the respiration in 10 minutes. A rabbit to which a similar dose (0·48 gramme per kilogramme) was given also died in 10 minutes, and in this case the heart and respiration ceased together. No sign of narcosis, rigidity, or tetanus occurred. It seems to me that these experiments show that papaverine is not possessed of any convulsant action in any sense of the word. As far as I can see its action is mainly depressant, and as the nerves still retain their irritability after death the effect is apparently due to an action on the central nervous system.

My experiments with the other alkaloids corroborate, on the whole, those of previous observers. Thebaine is almost a pure convulsant and the same may be said of laudanine and laudanosine. Hydrocotarnine, protopine, and codeine also possess convulsant properties and so does morphine in frogs and many mammals. Protopine produces more clonic convulsions than the other alkaloids, but this does not seem sufficient to justify its being placed in a separate division. Narcotine and cryptopine I have not found markedly convulsant and narceine seems to possess no action whatever in this direction. Von Schröder found it without effect when given per os to a rabbit, and in a kitten to which 0·1 gramme per kilogramme

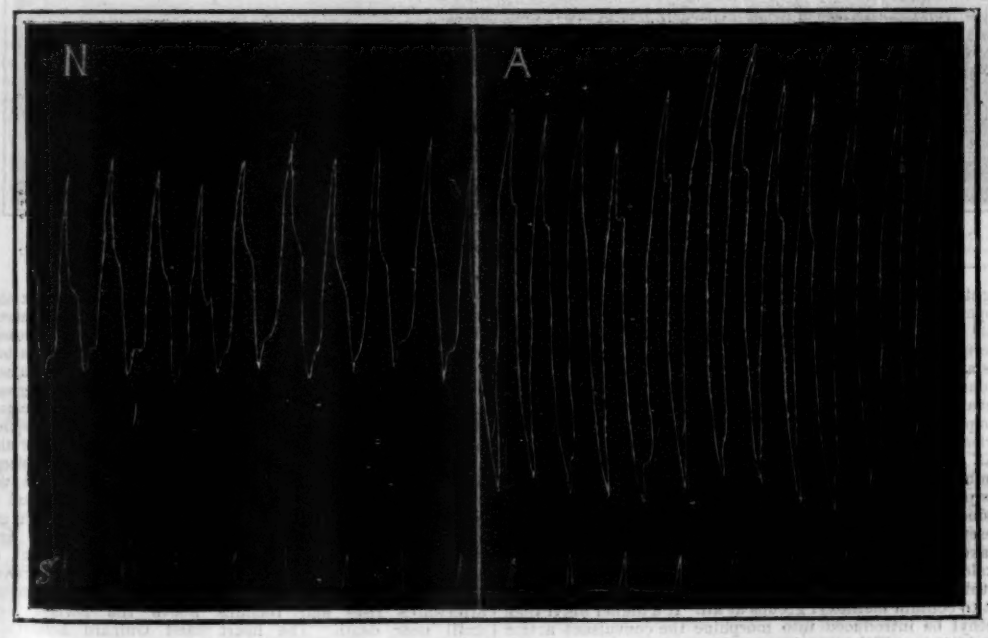
was given by the mouth I obtained no action. Injected intra-peritoneally into a rat 0·5 gramme per kilogramme (1·25 cubic centimetres of 2·5 per cent. solution) only produced slight and transient depression, and in a frog 0·02 gramme produced after some time depression, followed

FIG. 15.



Effect of 0·1 gramme of morphine acetate on respiration when injected intravenously.

FIG. 16.

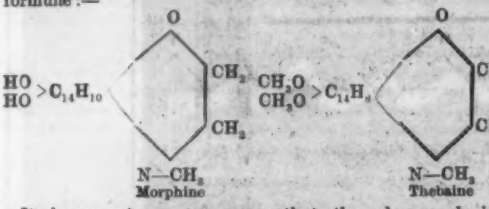


Cardiogram—sheep. N = Normal trace. A = After 0·25 gramme morphine hydrochloride.

in a few days by death. Previously to death the animal became slightly tetanic when touched. The order of toxicity, according to my experiments, is—narceine, narcotine, morphine, codeine, papaverine, hydrocotarnine, laudanosine, laudanine, protopine, and thebaine. As regards therapeutic utility none of these substances, except those already in use (morphine and codeine), are likely to prove of value in practice.

I have said already that we know comparatively little of the chemical constitution of these bodies, but it will be interesting, and perhaps not unprofitable, to compare for a moment the actions of these alkaloids in the light of our present knowledge of their constitution. And as morphine and thebaine represent the two physiological types of the morphine alkaloids we will take these. Chemically they

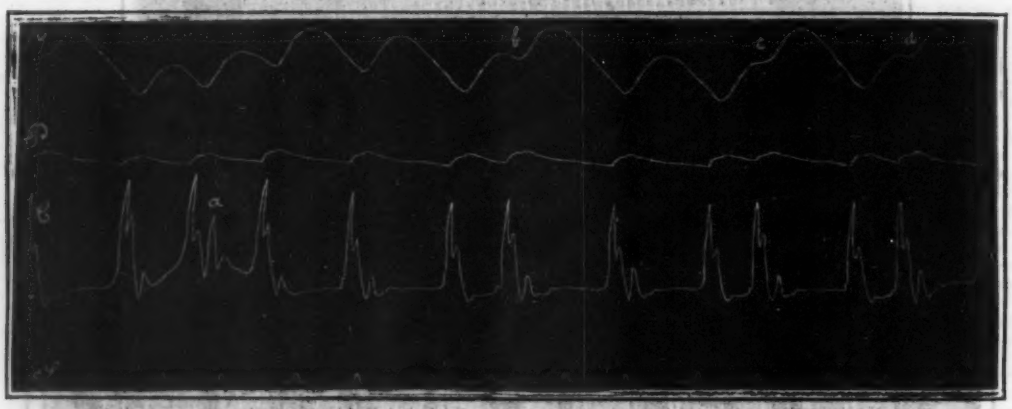
are closely allied—more closely than we should expect them to be from their physiological effects—morphine being a derivative of tetra-hydro-phenanthrene and thebaine of di-hydro-phenanthrene. Morphine contains two hydroxyl groups—one alcoholic and the other phenolic—and thebaine two methoxyl groups. Thebaine, therefore, differs from morphine in possessing two methyl groups in place of the two hydrogens of the hydroxyl and in containing two hydrogens less in the remaining radicle. This is seen in the following formulæ :—



It is open to us to assume that the pharmacological influence of the last-named hydrogens is small, and if we do this we should then turn our attention to the methoxyl groups. We know that methyl when introduced into some alkaloids produces profound changes in the pharmacological action of these, so that *a priori* there is nothing improbable in the view that the difference in action between morphine and thebaine might be due to these methyl radicles. The view is even supported by the fact that codeine, which is morphine with one hydroxyl group replaced by methoxyl, is intermediate in tetanising power and toxic effect between this and thebaine. Laudanine ($C_{17}H_{13}N(OH)(OCH_3)_2$) and laudanosine ($C_{17}H_{13}N(OCH_3)_3$) which are closely allied to thebaine in pharmacological action also contain methoxyl groups, but the position of these is unknown and the comparison does not help us much. It shows us, however, that the tetanic effect does not go on increasing with the number of methoxyls, as laudanine which contains three is less powerful than thebaine containing only two, and laudanosine containing four is still less powerful. Evidently the presence of methyls in other parts of the molecule has a weakening effect on the convulsant action. The other opium alkaloids possessing tetanising effects cannot be compared in this connexion. Protopine is said by Schmidt and Selle not to contain methoxyl groups at all. If a higher alkyl than methyl be introduced into morphine the convulsant action is said to be still further increased. Thus codethylin, which is morphine in which one of the hydroxyls has been replaced by ethoxyl, is more powerful than codeine (methyl morphine). Von Schröder has even advanced a general law: if a hydrogen of morphine be replaced by an alcoholic radicle ($C_n H_{2n+1}$), as n increases the tetanising and paralysing action of the alkaloid increases. $C_p H_{2n}$ and $C_p H_{2n-1}$ act in the same direction.

But to return to morphine. The general action of this drug is well known to all of you and I have nothing new to add as to its effects. I have already called your attention to the fact that in many animals it produces excitement rather than sleep, and that even in men excitement, sickness, and other untoward effects instead of sleep sometimes follow its use; but in the majority sound sleep is produced. It cannot, however, be employed habitually as a hypnotic, mainly on account of the rapid tolerance which is produced, and also on account of its tendency to induce a habit and produce untoward effects on the system. But whenever pain is present morphine is the hypnotic *par excellence;* to this I shall return in my next lecture. With morphine we have no longer to deal so much with a depressant effect on the circulation, as in the case of chloral and its allies, as with an effect on the respiration. This comes out in nearly every tracing taken with this drug. At first there is often increase in the frequency and depth of the respirations, and sometimes this effect may last a considerable time, but during the sleep produced by the drug the respirations are almost invariably slower and often shallower. Later they may become irregular and rapid or may take on a periodic rhythm simulating that which is known as Cheyne-Stokes' respiration. The irregularity, cessation, and subsequent re-commencement at a slower rate of the respiration is well shown in the annexed figures (Fig. 14 A, B, C) taken from Guinard.[14] It is that of a dog (16 kilogrammes) to which eight centigrammes of morphine hydrochloride were given intravenously.

FIG. 17.



Dog two and a half hours after morphine. M, Blood-pressure. P, Pulse. C, Cardiogram. a = Abortive beat.

M represents the blood-pressure, P the pulse, and R the respiration. The arrow shows the time of commencement of the injection. The respiration rapidly becomes irregular and then ceases; afterwards it re-commences but at a much slower rate. The same effect is usually obtained in other animals. From a rabbit which had been given morphine intravenously until just anæsthetised the tracing shown in Fig. 15 was obtained. It shows a slower respiration than normal. The blood-pressure is also under the normal and this is the usual condition in morphine sleep. According to Guinard the effect of morphine on the circulation varies somewhat according as the animal is narcotised or not by the drug. In animals which are narcotised, such as the dog, the blood-pressure at first rises and then falls below the normal to the extent of about 20 millimetres of mercury. In animals not narcotised there may be a preliminary fall, but the pressure afterwards rises and remains above the normal level until near death. The heart itself Guinard believes is stimulated directly, more especially in those animals which are not narcotised by morphine. Thus in a sheep the tracing of the heart, shown in Fig. 16, was obtained before N. and 10 minutes after A. 25 centigrammes of morphine. After large doses in the dog the heart-beat sooner or later becomes irregular, taking on sometimes a bigeminal

[14] La Morphine et l'Apomorphine, 1898.

character and not unfrequently abortive beats—beats rapidly following a previous one and insufficient to influence the pulse—occur. (Fig. 17.) The irregularity he is inclined to attribute to a central action; as section of the vagus caused it to disappear. This is of importance in connexion with the use of morphine as a hypnotic in advanced heart disease, for although in this condition it is one of the best hypnotics we possess it is by no means free from danger. Guinard's observations point to the cause of this.

Apart from its use in heart and lung disease the other untoward effects of morphine are perhaps of more importance. After its use in any form, more or less depression, headache, anorexia, and constipation result and occasionally even more serious symptoms. Some of these—such as the constipation—can be rectified by medicinal treatment, but it would be difficult, even if it were advisable by such methods, to counteract the ill effects of morphine under all conditions, and consequently attempts have been made to find less dangerous and equally effective substitutes. To two such compounds I intend to draw your attention in the next lecture.

TRACHEOTOMY IN DIPHTHERIA.

BY GEORGE THORNTON, M.D. EDIN., M.R.C.P. LOND.,
SENIOR ASSISTANT MEDICAL OFFICER, FOUNTAIN FEVER HOSPITAL, TOOTING-GROVE, S.W.

I THOUGHT that it might be of interest to publish some observations on the tracheotomies in diphtheria which have been performed in the Fountain Fever Hospital at Tooting of the Metropolitan Asylums Board since the introduction of the serum treatment for this disease. The proof of the value of the specific serum has been perhaps more strikingly shown in the cases where the danger has mainly arisen from obstruction to the respiratory passage than in ordinary cases of diphtheria where no such difficulty has occurred. The reason for this is two-fold—first, because the former cases from their more alarming symptoms come under treatment earlier; and, secondly, because the use of the serum eliminates what used to be a strong factor in causing a fatal issue—viz., the further downward extension of the disease. I shall refer to this again later. For convenience of reference various facts have been drawn up in a series of tables which are appended.

TABLE I.—*Age Periods.*

Age.	Number of cases.	Number of deaths.	Mortality, per cent.
Under 1 year	3	1	33·3
„ 2 years	26	12	45·3
„ 3 „	35	10	28·6
„ 4 „	30	11	36·6
„ 5 „	21	6	28·5
Total under 5 years	115	40	34·7
From 5 to 10 years	35	8	22·8
Above 30 years	1	1	100·0
Total...	151	49	32·4

From Table I. it will be seen that out of 151 cases there were 102 recoveries, giving a death-rate of 32·4 per cent. This contrasts very favourably with the death-rate of 70·4 per cent. which is the figure given for 261 cases in all the Metropolitan Asylums Board's hospitals during the year 1894, before the introduction of the antitoxic serum. On dividing the cases into three groups we find that the results in the Tooting Hospital show a steady improvement. They indicate that of the first 50 cases 60 per cent. recovered, that of the second 50 cases 68 per cent. recovered, and that of the third 50 cases 74 per cent. recovered. There is no doubt in my own mind that the improvement in the later series is largely due to the better quality of the serum supplied. These figures show that we may now venture to hope that three out of four cases will recover, whereas before the use of serum a proportion of two recoveries out of five cases was looked upon as remarkable and probably no one of the hospitals could show more than one recovery out of three in a series of 100 cases.

The mortality at the different hospitals and under individual medical men at these hospitals varies considerably. The proportion of recoveries in a large group of cases depends on several factors, of which the important ones are: (1) the age of the patient, (2) the site and extent of the exudation, (3) the day of the disease on which the serum was administered, and (4) the after-care of the patient. Personally I have had 60 cases with 12 deaths—a recovery rate of 80 per cent. Of these 60 cases the first 25 had a recovery rate of 60 per cent. and the last 35, with only two deaths, had a recovery rate of 94·3 per cent. and included a series of 19 consecutive recoveries. I know of another medical officer who has had 26 cases with two deaths and of another with 16 cases and two deaths. Such individual success, of course, is largely a matter of good fortune in the nature of the cases operated upon and, as I shall show later, is mainly dependent upon the second of the factors to which I have just referred. Still, there can be no doubt that in tracheotomy, as in other surgical procedures, experience tells, though here it is not so much in the operation itself as in the after-care of the patients. I shall take in turn those factors on which success depends. I believe, as just stated, that the site and extent of the diphtheritic exudation is the important feature, although as a rule age seems to be the one on which most stress has hitherto been laid.

Age.—From the table showing the number of cases and the deaths at the different age periods it will be seen that at three years of age and under 36·1 per cent. died and that at above three years of age 26·3 per cent. died, that of infants under two years of age 46 per cent. died, and that the only adult operated upon also died. These figures show that age does exercise a strong influence on the ultimate result. In the case of infants the result in any one case is always doubtful, and yet of the three cases under the age of 12 months only one died. The numbers are, however, too small to base any conclusions on. The occurrence of what may be termed natural complications, such as bronchitis or broncho-pneumonia, or of accidental ones such as diarrhœa, may prove fatal in an infant, although such complications would probably not have proved fatal in the case of an older child. In the case of adults, as far as my experience goes, the prognosis is grave when the question of tracheotomy arises. Here the dyspnœa is almost always associated, not only with laryngeal but with tracheal and bronchial exudation. I have seen five cases of marked dyspnœa in adults and of these four of the patients died, and in all four cases there was exudation in the trachea and bronchi, whilst the only survivor coughed up exudation which formed a branching cast of the trachea and bronchi.

TABLE II.—*Site and Extent of the Exudation.*

—	Laryngeal.	Faucial and laryngeal.	Faucial, nasal, and laryngeal.	Faucial, laryngeal, and tracheal.	Faucial, laryngeal, tracheal, and bronchial.	Laryngeal and tracheal.	Laryngeal, tracheal, and bronchial.	Totals.
Cases	9	60	10	51	19	1	1	151
Deaths... ...	1	10	6	15	16	0	1	49
Paralyses ...	0	10	2	14	1	0	0	27

Site and extent of the exudation. — This is really the important factor in the question, as I shall now try to show. From Table II. it will be seen that where the exudation did not extend below the larynx there were 79 cases with 17 deaths, or 21·5 per cent., and that where the exudation did involve the trachea or bronchi there were 72 cases with 32 deaths or 44·4 per cent. In the former 79 cases are included 11 cases in which a fatal issue resulted, not because the larynx was involved but because of the severity of the faucial affection, whilst in the latter 72 cases there were four such analogous cases. Taking away these from the two classes we get 68 cases where the exudation did not go below the larynx, and 68 cases where the exudation involved the trachea or bronchi or both. Of the former 68 cases four patients died, giving a mortality of 5·8 per cent., and

of the latter 68 cases 30 patients died, giving a mortality of 44·1 per cent. It will also be seen from this table that the exudation in 20 cases definitely involved the bronchial tubes. By "definitely" is meant that at the operation or post mortem or as a result of coughing *definite* membranous casts of some of the divisions of the bronchi were seen. Out of these 20 cases no fewer than 17 of the patients died, which shows the extreme fatality of such involvement of the lower respiratory passages. It is probable, however, that these figures rather exaggerate the fatality of bronchial diphtheria, as I have no doubt that in some of the cases classed as tracheal and not bronchial the exudation did really to some extent involve the bronchi. As there was no definite proof of this, however, they have not been included under the head of "bronchial diphtheria," although we know that the exudation in the bronchi may get soft and friable and so come away in fragments of such an appearance that they afford no proof of the seat of origin. Making a rough allowance for this I believe that where the exudation does extend into the bronchi the mortality is nearly 75 per cent.

TABLE III.—*Site of Exudation according to Age.*

Age.	With involvement of trachea or bronchi.		Without involvement of trachea or bronchi.	
	Cases.	Deaths.	Cases.	Deaths.
Under 1 year	1	1	2	0
,, 2 years	11	7	15	5
,, 3 ,, ...	16	7	19	3
,, 4 ,, ...	16	9	14	
,, 5 ,, ...	13	4	8	2
From 5 to 10 years ...	31	5	14	3
35 years	1	1	—	—

These possible sites of the exudation have the greatest influence on the mortality at early ages. Age *per se* has not that great influence which is usually attributed to it. Table III. shows that in those cases where the exudation did not extend below the larynx the death-rate at three years of age and under was actually less than the death-rate above three years in the ratio of 20 per cent. to 22·7 per cent. The figures also show, however, that tracheal and bronchial diphtheria are more common (as 56 is to 43) and more fatal (as 54 is to 40) at the earlier age; and this is really the main reason why in young children diphtheria requiring tracheotomy has a greater mortality than in older children. Not only have the site and extent of the exudation a marked effect on the death-rate, but they have also an important influence on the possibility of one or other of the forms of diphtheritic paralysis occurring. Thus Table II. shows that in 11 cases where there was no affection of the fauces or nose there was no paralysis, that in 130 cases where there was affection of the fauces there were 24 cases of paralysis, and that in 10 cases where there was affection of the nose there were two cases of paralysis. These figures are interesting in their bearing on the cause of death of cases of tracheotomy and the dosage of serum required, as will be considered later.

I do not propose to say much regarding the operation itself. Personally I now prefer the "low" operation, but a somewhat extensive experience has convinced me that one form of the operation is just as likely to be successful as another. The main points in my mind are to endeavour to disturb the relation of parts as little as possible, to avoid hæmorrhage, and to take enough time. An operation in a great hurry is quite the exception and an anæsthetic, chloroform, should nearly always be given. When the trachea has been opened any visible exudation should be carefully removed. There should, however, be the least possible interference with the inside of the trachea, except in those cases where little or no relief to the dyspnœa has been given by the operation owing to the presence of exudation in the bronchial tubes. No spraying or feathering should be done on any account except in the cases just mentioned, where the bronchi are plugged with exudation and no relief has been given. In such cases it is permissible, and even necessary, to endeavour by the use of a spray and feathering to procure the expulsion of some of the exudation before putting in the tube. As regards the form of tube which is suitable, I almost always use Durham's tubes, but here again I do not think that it matters very much what form is used. Every endeavour should be made to keep the wound clean and to get it to unite as quickly as possible above and below the tube. One or two stitches are advisable in most cases, as they promote speedy union by keeping the parts at rest and help to retain the tube in its proper place. For a dressing I usually use a moist piece of lint soaked in 1 in 40 of carbolic placed under the shield of the tube. In ordinary cases I have abandoned the use of the steam kettle, and am content with placing a piece of dry gauze over the mouth of the tube.

The after-care of the patient.—This is really of greater importance than the method of operating or the form of tube, and it is here that the experience of both medical man and nurse tells. I always endeavour to leave the outer tube undisturbed for from two and a half to three days. If this can be done it will usually be found on removal of the tube that the wound has completely united, except of course for a round hole where the tube was, and that the different layers of the tissues down to the trachea itself are glued together so that the hole remains quite patent when the tube is out; whereas, in a wound which is too often disturbed by removing the outer tube, &c., in the early period after the operation, the different layers of the tissues are separate and apt to overlap when the tube is out and so there is no longer a free patent opening down into the trachea from the surface. This usually means that the tube has to be worn many days more than it otherwise need have been. In my experience it is rare to have any trouble in the getting rid of the tube, except in those cases where there has been this imperfect union of the different layers of tissue in the wound, and it is seldom that this occurs when the outer tube is left unchanged for three full days. Unnecessary interference with a case of tracheotomy is much to be deprecated. To put the matter briefly—a case which can be left entirely alone will almost certainly get well, but one which has to be meddled with is a source of constant anxiety. So that in an ordinary case beyond changing and cleansing the inner tube from time to time nothing should be done. Liquid food may be given by the mouth as usual in the form of milk, but should regurgitation of the milk occur through the wound or tube, as it not infrequently does from two to four days after the operation, nasal feeding at regular intervals should at once be resorted to, as otherwise there is great danger lest "food pneumonia" should be set up. The early regurgitation of fluids is not due to palate or pharyngeal paralysis and usually passes off in a few days. Sometimes true muscular paresis does occur later and nasal feeding may have to be kept up for some weeks. In an uncomplicated case such as I have been referring to the outer tube should be removed after three full days, and if the wound has healed, as it should have done, it may be possible to dispense with the tube straight away, though it is often advisable to put in a rubber tube at night for one or two nights. If the wound has not healed properly but has gaped with its different layers all separate it may be necessary for a rubber tube to be worn more or less constantly for from 10 to 20 days until secondary union by granulation occurs. Even in these cases nothing should be done except to remove and cleanse the tube occasionally, as, of course, here there is no inner tube. I repeat, leave such cases alone as much as possible and the patient will recover almost certainly; but meddle with them in the way of spraying or feathering, &c., and the patient will probably develop broncho-pneumonia and very possibly die.

There are cases, however, which cannot be left alone and to these I shall now refer. These are the cases which we speak of as "dry" cases and they are a source of great anxiety. The patients bring up little or no mucus and make a dry whistling sound on coughing. Now this "dryness" in the majority of cases is due to the fact that there is diphtheritic exudation in the trachea or bronchi or both. In some instances, however, the dryness is not due to this cause but to an acute dry tracheitis and bronchitis and though this latter may be fatal yet it is not so dangerous as the former cause of dryness. According to my notes I find that there were 39 dry cases of which the cause was believed to be due to this acute tracheitis, &c., in 12 cases with three deaths, and to the presence of exudation in the trachea or bronchi in 27 cases with 17 deaths. So that of the 39 dry cases no fewer than 20 of the patients died, which shows that the condition is extremely grave, especially so when due to the presence of exudation in the lower air passages. Now this dryness is noted within

a very short time of the operation and in the fatal cases it usually continues until death, which event may occur in from a few hours to a few days. When the "dryness" is due to the exudation in the lower air passages little or no relief will have followed the operation. The respiration and pulse-rate remain high, the temperature rises, and the cyanosis and sucking-in are little if at all diminished. When the dryness is due, as I believe, to acute tracheitis and bronchitis this condition may be distinguished from the former by the fact that there has been considerable relief to the urgency of the dyspnœa but that there is a most troublesome dry, irritable cough, with rapid rise of temperature and of the pulse-rates and respiration-rates. In the three fatal instances of this latter condition death occurred within from 24 to 36 hours after the operation. The dryness due to exudation in the lower respiratory passages is, of course, also recognised as a rule at the time of the operation by the finding of adherent membrane in the trachea. Fortunately all dry cases do not end unfavourably and I believe that judicious treatment has a great effect on some of the cases. Where dryness has followed the finding of tough adherent membrane in the trachea at the time of the operation a departure from the rule of non-interference is justified and even necessary. The use of a spray of bicarbonate of soda (from 15 to 20 grains to the ounce) seems to have some effect in loosening the exudation and the quick passage of a suitable feather right down the trachea as far as possible may complete the separation and the resulting violent coughing which follows such manipulation may end in the expulsion of considerable fragments of membrane or even of complete casts of the early divisions of the bronchial tubes. The spray and feather should be used by the medical attendant himself and is best done, of course, with the tube out. This procedure may have to be repeated on more than one occasion. It has undoubtedly in some cases been the direct means of saving life. The dryness due to an acute, dry, inflammatory condition of the trachea and bronchi may be treated as follows. A minim or two of the bicarbonate of soda solution should be dropped into the mouth of the tube from time to time, whilst over the mouth of the tube may be kept a sponge wrung out of hot water and changed every few minutes. In addition to this I feel convinced that the internal administration of antimonial wine every two or three hours for from 24 to 36 hours is often of great service. In the majority of these cases secretion is re-established within a day or two, although even then we may have occasional trouble from the secretion drying, especially after sleep, and forming plugs of muco-purulent material, to get rid of which may even require the use of the spray and feather. Here it is of great advantage to have experienced nurses who can be relied on only to interfere in this way when really necessary. The dry cases if they recover under treatment not infrequently become affected with the opposite condition of profuse muco-purulent bronchitis and perhaps even with the patches of broncho-pneumonia. It is indeed probable that the treatment is directly responsible for this, but the gravity of the dry condition is such that its relief must be attempted at all hazards. Fortunately, if such after results do follow recovery occurs in most cases.

Various other troubles and complications occurring later will now be referred to.

Bronchitis or broncho-pneumonia.—This may occur in tracheotomy cases where no such spraying or feathering has been used and is to be treated on general principles. Sometimes we get a subacute bronchitis with an extraordinary amount of muco-purulent expectoration for days and weeks. The cases, I think, are benefited by the use of creasote internally. If the wound be not closed, as is usually the case, it is important that the nurse should always be at hand to wipe away the mucus coughed up.

Paralysis.—Trouble may arise from the development of ordinary diphtheritic paralysis. It is, however, a remarkable fact that such paralysis is extremely rare in cases of tracheotomy unless there has been a considerable amount of deposit on the fauces or in the nose. This statement is borne out by Table II., which shows that in 11 cases without involvement of the nose or fauces there were no cases of paralysis, that in 130 cases with involvement of the fauces there were 24 cases of paralysis, and that in 10 cases with involvement of the nose there were two cases of paralysis. Again, from Table IV., showing the apparent causes of death, we find that in the 49 fatal cases there were only five cases in which the patient died from the "cardio-gastric crisis" which is the most common cause of death in diphtheria. These figures all point to the fact that there is not the same amount of absorption of diphtheria toxin from the laryngeal or tracheal mucous membrane as there is from the nose or fauces. This will be referred to again in considering the dosage of serum necessary for the different cases and the causes of death after tracheotomy. By "cardio-gastric crisis" is meant a combination of symptoms and physical signs in the form of dilatation of the heart, irregularity of its rhythm, and alteration in the character of the sounds, associated with changes in the pulse and with vomiting, which last soon becomes a most distressing feature. When really well marked the condition almost invariably proves fatal, but cases are occasionally met with during convalescence after tracheotomy where the threatening symptoms pass off. The treatment adopted consists in feeding per rectum for some days and the hypodermic injection of strychnine in doses of from $\frac{1}{150}$th to $\frac{1}{100}$th of a grain every four, six, or eight hours according to the age of the patient, the gravity of the case, and the patient's tolerance of the drug. This cardio-gastric crisis is almost invariably met with from the tenth to the fourteenth day of the disease, and a patient who has shown no signs of it by the seventeenth day will in all probability escape from it.

Paralysis of the pharyngeal and laryngeal muscles, with weakness of the muscles of respiration which seldom occurs until late in convalescence, may prove a source of great danger also. This widespread paralysis, like the cardio-gastric crisis, is very rare in cases of tracheotomy unless there has been a considerable degree of faucial diphtheritic exudation. The danger in the condition consists in the accumulation of mucus in the pharynx, the larynx, the trachea, and the bronchial tubes, and the inability to get rid of it owing to muscular paresis. However marked it may be, and however desperate the patient's condition appears to be, there is no reason for despair, provided that the heart does not appear to be seriously affected also. This accumulation of mucus and threatened respiratory failure should be treated by careful nasal feeding and by the hypodermic use of strychnine. The excessive accumulation of mucus should be got rid of as much as possible by the nurse frequently swabbing out the pharynx and by the occasional more or less complete inversion of the patient so that his head hangs low down on the edge of the bed. At the same time the chest should be firmly compressed two or three times so as to clear the bronchial tubes as much as possible. Some benefit in these cases is, I believe, to be found in the internal administration of tincture of belladonna, which may be given in the nasal feeds and which when given in full doses seems to reduce the amount of mucus formed.

One other point remains to be discussed in the after-treatment of cases of tracheotomy, and that is the difficulty experienced at times in getting a child patient to do without the tube. My experience is that this difficulty rarely arises if the operation has been done so as to disturb the parts no more than is necessary and if the outer tube has been left untouched for three days so that time is given for the different layers of the tissues throughout the wound (except of course where the tube is) to become firmly united together. This is one of the reasons why I have laid stress on the advisability of not being in a hurry to change the outer tube. Apart from the cases before mentioned—where such primary union of the different layers of the wound has not occurred so that the tube will probably have to be worn until secondary union by granulation occurs—it is seldom that we find any definite organic cause as to why a child will not do without the tube. In nearly all cases it is apparently nothing more than fright. Much patience and resource are required in getting over the difficulty. Personally, I begin by passing a large flexible French catheter from the wound through the larynx into the mouth to make sure that there is no real obstruction. Not infrequently this seems to have a great moral effect and to be all that is required. In other cases, however, the difficulty is not so easily got over. Various expedients must then be tried. These cases require the constant attention of a skilful nurse. Some children so long as they are amused or their attention distracted with toys, &c., will do without their tube until perhaps they fall asleep and one quiet night usually settles the trouble. Some, however, are not so easily satisfied—they will not go to sleep but, getting cross and irritable, have attacks of dyspnœa so urgent that nothing remains but to put the tube back. We must keep on making attempts. Of

course when attempts are being made to get rid of a tube it is absolutely necessary to have a really competent nurse—a nurse who can recognise danger and meet threatened choking by promptly inserting dilators and putting back the tube. It is impossible for the medical man to be in attendance always and it is on the nurses that he has to rely. Some children, as I have said, are all right as long as their attention is diverted and others are all right as long as they are wide awake, but when towards night the wound is nearly closed and they fall asleep for a minute or two they may wake up again in great fright and distress. Some such cases a skilful nurse can manage through the night by sitting up such patients in her arms in a chair, keeping them awake all night if need be, and putting in the dilators and giving the wound a stretch from time to time if necessary. If one night is got over without the necessity of putting back the tube the difficulty is usually at an end. Now and then cases are met with in which the patients have this "night-and-sleep" stridor lasting for three or four days, although they are quite free from any distress during the daytime and in which the timely insertion of the dilators in the night on two or three occasions has been all that was required. Of the 15 cases in which we had much difficulty with the tube in only one case did we find that it was necessary to give an anæsthetic and scrape away exuberant granulations which were growing through the edges of the wound into the trachea. In all the cases success was with care and patience attained eventually.

TABLE IV.—*Causes of Death.*

Toxæmia.	Asphyxia.	Broncho-pneumonia.	Cardio-gastric crisis.	Hæmorrhagic cases.	Respiratory failure.	Acute tracheitis and bronchitis.	Marantic thrombosis.
8	16	9	5	5	2	3	1

In Table IV. I have endeavoured to show the apparent causes of death. I shall now briefly refer to these 49 fatal cases. Eight deaths were due to diphtheritic "toxæmia." These were all cases of severe faucial disease and were of such a nature that a fatal issue was not influenced to any degree by the fact that the larynx was implicated and tracheotomy was necessary. 16 deaths are put under the head of "asphyxia." By this is meant that the membranous exudation extended into the bronchial tubes and that no relief to the dyspnœa resulted from the operation, so that death resulted from cardiac failure consequent on obstruction to the lower respiratory passages. Five deaths are put under the head of "hæmorrhagic diphtheria," which is always a fatal form of the disease. Only those cases are classed as hæmorrhagic which showed local bleeding from the nose or fauces, petechial hæmorrhages into the skin, and larger subcutaneous extravasations. No cases of tracheotomy are more distressing than these, as may be imagined from the constant oozing of blood, which gets into the trachea (even the trachea itself may bleed), and is both coughed all over the place as well as sucked into the air vesicles. Nine deaths resulted from the occurrence of broncho-pneumonia. In two cases this complication was already present at the time of the operation. It is probable that some of the cases are due directly to the diphtheria bacillus and not to secondary infection with streptococci or pneumococci. Two deaths resulted from late respiratory paralysis and the accumulation of mucus in the bronchial tubes. Three deaths, as before mentioned under the term "dryness," are classed as being due to acute tracheitis and bronchitis, as on post-mortem examination no other cause could be made out. One patient—a baby—died from the subsequent development of marantic thrombosis of the longitudinal sinus. Five deaths were due to the development of the "cardio-gastric crisis" described. These five cases and the five hæmorrhagic cases, like the eight due to "toxæmia," had more or less extensive faucial diphtheria. Out of the 49 deaths 13 occurred within 24 hours from the operation and 21 within 48 hours.

The figures already quoted show the remarkable effect of the specific serum in reducing the death-rate of cases of tracheotomy for diphtheria. This effect, in my opinion, is largely to be ascribed to the fact that the injection of the serum is followed very shortly by an arrest of any tendency of the disease to spread. Since the introduction of this remedy I do not remember seeing a single case in which the trachea or bronchi became affected if they were not already so at the time of the operation. In the days before the use of this remedial agent the further downward extension of the disease was a frequent cause of death—even the wound itself not uncommonly became covered with diphtheritic exudation—and this, too, I have never seen since serum was used. As I have said before, the most frequent causes of death in cases of tracheotomy are the existence of severe faucial disease and the presence of exudation in the trachea and bronchi. If these two conditions are absent nearly all cases of tracheotomy ought to recover with the use of serum.

As further showing the influence of the serum treatment in staying the spread of the disease I may give the days since admission on which the operation was performed. In 119 cases it was performed on the day of admission, in 25 cases the day after, in six cases two days after, and in one case three days after. Before the days of antitoxin it was far more frequent to have to perform tracheotomy two, three, or four days after admission. It has been pointed out how much more likely is the serum to be beneficial the earlier it is given in cases of diphtheria, and so also, as might be expected, our figures show the same advantage of the early administration in cases of tracheotomy. Injection on the second day of disease gave 21 cases with two deaths, on the third day 47 cases with 16 deaths, and on the fourth and subsequent days 83 cases with 31 deaths. The late cases are usually severe faucial cases where the disease has spread to the larynx, whilst the earlier cases are those in which the larynx is first, or at any rate early, involved, the urgency of the symptoms causing early removal to the hospital. The proper dosage of the serum is not at all settled as yet. Fortunately there is no mistake possible in this respect except in the giving of too small a dose. Personally, I think that for an ordinary case, with little on the fauces and nothing in the trachea, one dose of 4000 units is sufficient. In a case with a moderate affection of the fauces I should repeat the dose next day. Where the fauces are extensively involved and where there is exudation in the trachea and bronchi larger doses are advisable—say, three doses of 8000 units at intervals of 12 hours. It must be understood that these doses are given as a result of my own experience only. Other medical men in these hospitals give different doses. Usually the difference is in giving larger doses. Although I firmly believe no harm to be ever done by large doses of from 40,000 to 80,000 units, yet just as firmly do I believe that the moderate doses recommended are equally efficacious.

For permission to make use of the notes of the cases referred to I am indebted to Dr. C. E. Matthews, the medical superintendent at the Fountain Fever Hospital.

Tooting, S.W.

FOUR CASES OF

ABDOMINAL PAN-HYSTERECTOMY FOR FIBROID TUMOURS OF THE UTERUS.

BY ARTHUR H. N. LEWERS, M.D. LOND.,
OBSTETRIC PHYSICIAN TO THE LONDON HOSPITAL.

MY attention was directed to the operation of pan-hysterectomy for fibroids by reading Mr. Christopher Martin's paper, published in the Transactions of the Edinburgh Obstetrical Society for 1896, in which he gave an account of eight cases, in six of which the operation was performed for fibroid tumours of the uterus. The essential features of his method are as follows. The abdomen is opened by the usual incision and the tumour if possible brought out of the wound; the upper and middle thirds of each broad ligament are then tied successively from above down by double ligatures about an inch apart, and the ligament is divided between them. A transverse incision is then made across the anterior aspect of the tumour about an inch above the line of reflection of the peritoneum to the bladder. This incision only divides the peritoneum, so that it can be stripped down and forwards, thus enabling the operator to detach the bladder from the anterior aspect of the cervix. The anterior vaginal fornix

immediately in front of the cervix is then made to project into the wound by a long pair of Wells's pressure forceps bent on the flat passed up the vagina by an assistant. The vagina is opened into by cutting on the point of the forceps. The finger passed through the opening serves as a guide in similarly opening the posterior fornix. The uterus at this stage is thus only still attached by the lower third of the broad ligament on each side containing the uterine arteries. The next thing is to tie the uterine arteries on each side, taking special care to avoid the ureters. The uterus can now be separated from its remaining lateral attachments and is then loose and can be taken away. The ligatures on the upper part of each broad ligament are cut short, but the ligatures on the uterine arteries are left long and are drawn down into the vagina. A thick strip of iodoform gauze is then drawn down into the vagina from above, about an inch of it being left projecting into the peritoneum. The abdominal wound is then completely closed.

I had never seen this operation performed when I operated on my first case and followed the above description as closely as possible, but I had had the advantage of having performed a considerable number of abdominal hysterectomies for fibroids by the intra-peritoneal method, in which the management of the upper parts of the broad ligaments is essentially the same, and I have had a large experience of vaginal hysterectomy and of the supra-vaginal amputation of the cervix for cancer, so that the relations of the cervix to the bladder, ureters, and uterine arteries were practically familiar to me. The operation seems to me to be a very good one; it entirely does away with the stump which has often in the past been a source of trouble, whether fixed outside by the clamp or treated by the intra-peritoneal method, and it provides free drainage below. I have only performed pan-hysterectomy for fibroids in the four cases recorded in this paper and in all the patients made good recoveries. One of the objections to the operation is that it takes rather longer than hysterectomy with the intra-peritoneal treatment of the stump. The cut edges of the vaginal walls in my cases required several ligatures, which I found it convenient to pass with an ordinary Hagedorn's needle. Especially is this the case posteriorly. There is a good deal of loose tissue between the peritoneum of Douglas's pouch and the posterior vaginal wall in relation to it. In fact, in opening the posterior fornix from above I found it an advantage to pass a ligature in a curved Hagedorn's needle from the peritoneum through the posterior vaginal wall into the vagina, and then back again through the vaginal wall to the peritoneum and to tie it before opening the posterior fornix so as to avoid having a wide separation of the cut edges of the peritoneum and of the posterior vaginal wall respectively. In cases where there are fibroids so situated as to encroach largely on the cervix and greatly alter its relations it appears to me that there would be great danger of injuring the ureters. In cases, however, where the cervix is not much involved this may be avoided by anyone who is careful and familiar with the position of the ureters in relation to the cervix. No special instruments are necessary for this operation other than those used in any ordinary abdominal section, unless the long bent Wells's forceps be so considered, which is used as a guide in opening the anterior vaginal fornix. There is one point in Mr. Martin's paper which will probably not meet with universal approval. He prefers to remove the ovaries and tubes with the uterus whenever possible but appears to consider it a matter of minor importance whether this is done or not. Of course, this point is one which affects all varieties of hysterectomy equally and is in no way peculiar to the operation of pan-hysterectomy. For my own part I must say that I think it is a good thing if possible to leave one ovary, and I have made a practice of doing so whenever I could in all recent cases. In two of Mr. Martin's cases it is interesting to observe that removal of the appendages at a previous operation had failed to cure the patient. He says: "It is these failures that shake one's faith in the advisability of removing the appendages for myoma, and lead one to search for some more excellent way." Undoubtedly the uncertainty of the result as to the relief of the symptoms in removing the appendages for uterine fibroid is a serious drawback. A large proportion do extremely well, but there is a minority of the cases in which the patient has gone through all the mental and bodily wear and tear of a major operation only to find her symptoms much the same as before. Even where a completely satisfactory result has apparently been obtained there is still a chance that perhaps after a long interval the symptoms may all recur. I have myself seen a case of fibroid in which the uterine appendages were removed for menorrhagia in a single woman. All the symptoms disappeared and menstruation ceased absolutely for five years; then she married and the profuse floodings recommenced. The operation of removal of the appendages is moreover not entirely free from risk. Mr. Martin mentions, for instance, that he had performed the operation in 28 cases with three deaths.

As regards the treatment of fibroids generally it may be said that in some cases there are no symptoms and in these of course no treatment is required. In other cases the symptoms can be kept in check by prolonged medicinal and dietetic treatment, so long as the patient is content to employ it. When, however, the symptoms, and bleeding more especially, persist in spite of treatment the next step usually is to dilate the cervix and to ascertain whether any tumour is so situated as to be capable of being removed by the vagina. If even there is nothing that can be removed in this way, dilatation of the cervix followed by curetting and the application of tincture of iodine to the endometrium often improves matters for a time at least. Finally, if all the above measures fail, or if in the first instance the symptoms are due to mechanical causes owing to the great size of the tumour, there remains for consideration some form of major operation. Removal of the uterine appendages is open to the objections mentioned above, and is besides only suitable for cases where the tumour is of moderate size. More certainly effectual is removal of the uterus and tumours. The cervix may either be left and treated by the intra-peritoneal method, or the whole uterus, cervix as well as body, may be removed by abdominal pan-hysterectomy, the operation being conducted entirely from above as in the following cases.

CASE 1.—The patient was a woman, aged 40 years, who had been married 22 years and had had one child, born at the seventh month, a year after marriage. She had not been pregnant since. She was admitted into the London Hospital under my care on Nov. 23rd, 1898. She was quite well till three years previously. She then began to suffer from excessive losses at the menstrual periods, for which she was under medical treatment for 18 months. Then she became regular for three months. At the end of this time the bleeding recommenced and had been more or less constant ever since. The patient considered an interval of six days without any loss of blood a long one. About two years ago she noticed that her abdomen was becoming larger, but she first noticed a definite swelling in the lower abdomen in January, 1898, since which time it had increased considerably. Since January, 1898, she had also suffered from pain referred to the epigastric region, the right iliac region, the hypogastric region, and round the sacrum. It had been of an intermittent and aching character. For the last two years she had been obliged to give up her work, though she had not been confined to bed. For the last nine months there had also been unusual frequency of micturition, both day and night. The catamenia appeared when she was between 12 and 13 years of age; she was regular every four weeks, without much pain, but up to the time of her marriage the periods were accompanied by distressing vomiting which was relieved by the flow. She said that she was unwell every four weeks during the whole of the seven months when she was pregnant. The family history was good and she had had no severe illnesses. On examination on Nov. 28th there was a good deal of fat in the abdominal wall and the umbilicus was well depressed. A hard, slightly irregular swelling was felt in the lower abdomen rising out of the pelvis and reaching to within two fingers' breadth of the umbilicus. The highest point of the tumour was to the right of the middle line. Nothing was heard over the tumour. The breasts were large, but otherwise they showed no change. On vaginal examination there was slight prolapse of the anterior vaginal wall; the vaginal portion of the cervix was quite small and a little soft. The swelling in the abdomen was evidently a fibroid tumour connected with the uterus; it was easily felt in the anterior fornix. Strong arterial pulsation was felt in both lateral fornices. The uterus was freely moveable. There was no evidence of anything wrong with the heart, the lungs, or the kidneys.

The operation was performed on Dec. 10th. In addition to the usual preparations for an abdominal operation the vagina

was douched with a 1 in 2000 perchloride of mercury lotion followed by a 1 in 40 carbolic lotion on the night before the operation, on the morning of operation, and also one hour before the operation. The A.C.E. mixture was given to start with, but the patient struggled so violently that chloroform was substituted for it and was continued throughout the operation. The abdomen was opened in the usual way, the incision extended from the umbilicus to within one and a half inches of the pubes. The hand was then inserted and the tumour was with some difficulty brought out of the wound. It was evidently the uterus enlarged by fibroids. Both Fallopian tubes were dilated, the right one especially, but the ovaries appeared normal. The broad ligaments were tied with stout silk from above downwards on each side in such a way as to allow of the removal of both sets of uterine appendages with the uterus. A transverse incision was then made through the peritoneum on the anterior surface of the uterus about an inch above the line of reflection from the bladder, and this peritoneal flap was stripped down with the bladder from the anterior surface of the cervix. A pair of stout Wells's forceps bent on the flat was then pushed up the vagina so as to make the vaginal wall prominent at the bottom of the wound, the peritoneal flap and bladder being to the front of this prominence, and the anterior surface of the cervix being behind it. The anterior fornix of the vagina was then opened by cutting on to the point of the forceps. The posterior fornix was then opened on the finger passed through the opening already made in the anterior fornix. The lateral attachments on each side were then tied in sections, the uterine arteries being secured in this set of ligatures; the ends of the silk were left long. The tumour, comprising the body of the uterus, the cervix, and the uterine appendages, was then removed by cutting between the last set of ligatures and the uterus. Several bleeding points in the cut vaginal walls required ligatures. All the ligatures, which had been left long with the exception of those securing the upper parts of the broad ligaments, were then drawn down into the vagina; a strip of iodoform gauze was also drawn from above into the vagina, about one inch of it being left projecting into the peritoneal cavity. The abdominal wound was then completely closed. Subsequent progress was quite satisfactory. The temperature only once reached 100° F. (on the evening of the second day) and at other times it was between 97° and 99°. The pulse only once was 100 (when the temperature was 100°), but as a rule in the 10 days after the operation it was between 80 and 94. The patient had, however, rather a tendency to diarrhœa for some time, which appeared to have been caused by irritability of the rectum set up by the nutrient enemata which were used for some days after the operation. The iodoform gauze was taken out of the vagina on Dec. 17th, and the stitches were removed from the abdominal wound, which was quite healed, at the same time. The abdomen was well strapped after taking out the stitches. On Jan. 4th, 1897, a Sims's speculum was cautiously passed so as to expose the top of the vagina; the ligatures which had been drawn into the vagina were found to be quite loose, and they came away readily. On Jan. 15th the patient left the hospital quite well.

Additional note on the specimen.—Both Fallopian tubes were completely closed at their outer ends and the tubes were moderately dilated to the size of the little finger. The left tube contained brownish watery fluid. There were numerous adhesions about the dilated tubes, one especially between the left tube and the sigmoid flexure. On cutting open the uterus it was seen that most of the mass of the "tumour" lay in the posterior wall. The right ovary showed a recent menstrual corpus luteum.

CASE 2.—The patient, a single woman, aged 47 years, was admitted under my care into the London Hospital on August 4th, 1897, complaining more especially of an almost continuous red vaginal discharge during the five months preceding her admission. She had been suffering from excessive losses at the menstrual periods for five years previously to admission to hospital, having been worse in this respect during the last three years of the time. Sometimes the loss had continued for a month and then, after an interval of only a week, it had recommenced. For the five months preceding admission to hospital the loss of blood had been almost continuous. She kept a school till three years ago, but was then obliged to give it up owing to ill-health. She also complained of pain in the lower part of the back and down the legs and was conscious of a swelling in the lower part of the abdomen. As regards her previous health, she had been delicate all her life, and had had small-pox, scarlet fever, "congestion of the lungs," erysipelas, and whooping-cough. The catamenia appeared when she was between 14 and 15 years of age, but she had never been regular, there had been intervals sometimes of three and sometimes of five weeks between her periods. When she was 18 years old she had a brownish discharge which lasted continuously for four months. Years ago she said she used to have a good deal of pain at the periods. The family history presented nothing of importance except that her father died from consumption. On August 9th she was decidedly anæmic. Owing to the difficulty found on attempting an examination in the ordinary way she was anæsthetised. On examining the abdomen then nothing abnormal could be felt in the lower abdomen. On vaginal examination there was some blood seen about the external parts, the uterus was found to be strongly retroverted, but it could be easily pushed up into the normal position and it then formed an obvious projection in the lower abdomen reaching half way between the umbilicus and the pubes. The uterus was freely moveable. The sound passed four inches. There was no evidence of any disease elsewhere.

The operation was performed on August 20th. The method adopted was identical with that described in the preceding case. There were, however, no adhesions. The patient did very well after the operation; the temperature only once rose to 100° F.—on the evening of the day after the operation. The stitches were taken out on August 30th and the abdomen was well strapped. The iodoform gauze was not taken out of the vagina till Sept. 9th, nearly three weeks after the operation. Several of the ligatures hanging in the vagina came away, at the same time, but some were not ready to come away and were left. The patient went out of the hospital on Sept. 19th quite well. I have seen her at intervals since. All the ligatures came away without assistance, and her condition has been quite satisfactory.

CASE 3.—The patient, a single woman, aged 51 years, was admitted into the London Hospital under my care on August 5th, 1897, complaining of bearing-down pain in the lower abdomen and of a "dreadful" bearing-down pain on passing urine. She dated her illness from a year before admission to hospital, when she was knocked down by a cart and thrown violently on her "stomach." She also complained of great weakness, languor, pain on stooping, and of losing flesh. The catamenia appeared at 14 years of age, and she had been "regular" about every three weeks, the periods lasting four or five days. There had been no intermenstrual loss. During the previous year the loss at the periods had been rather less if anything than before, though they had recurred at the usual times. She had had one child 25 years before. On August 9th a hard, irregular swelling was felt in the lower abdomen, rising out of the pelvis and reaching nearly to the umbilicus. It was somewhat moveable from side to side and also could be displaced upwards to some extent. On vaginal examination it was seen that the perineum had been to some extent torn, and this led to the inquiry which resulted in her admission that she had had a child 25 years previously. There was slight prolapse of the posterior vaginal wall. The external os uteri was slightly patulous, admitting the tip of the finger about a quarter of an inch. The sound passed nearly four inches. The whole mass was freely moveable. As she was anæmic it was thought well to put her on a course of iron for some time, and to endeavour to improve her general condition as much as possible.

The operation was performed on Sept. 30th. The procedure adopted was essentially the same as that in Cases 1 and 2 and need not, therefore, be described further. So much care was taken to keep close to the cervix in order to avoid the ureters that on one side a thin section of the cervix was left in separating it towards the end of the operation from its lateral attachments. In this case the left ovary was purposely not removed. There were adhesions on the right side between the uterine appendages and intestine for four or five inches and also with the omentum, which caused some difficulty at first in getting at the right broad ligament. The patient did well in essential points after the operation. A stitch-hole abscess, however, occurred at the upper part of the wound about the eighth day and caused the time to be longer than usual before the whole of the abdominal wound could be described as healed. There was also slight fever, no doubt due to the same cause, for the first eight days; the highest temperature reached was 100·8° F. on the fifth day. The stitches were removed on Oct. 9th and the wound was strapped. On the 23rd the gauze was removed from the

vagina, and several ligatures came away at the same time. Two, however, were not ready to come away, and were left to separate naturally. The patient got up on the 24th and went out of the hospital on Nov. 5th.

CASE 4.—A single woman, aged 41 years, was admitted into the London Hospital under my care on August 11th, 1897, complaining of a feeling of "weakness" in the lower abdomen for the last six months and of a swelling which she had noticed there for four months. She also said that she had been getting thinner lately and had had at times increased frequency of micturition during the last six months. Her general health previously to the last six months had been good. With regard to her menstrual history the catamenia appeared at the age of 14 years, and she had been regular every three weeks or a month. The period generally lasted for four or five days and was painless. At the last two periods she had had slight pain and the loss had been more profuse; the last period, for instance, lasted 10 days. On August 12th the patient was pale but not markedly anæmic. On examining the abdomen a hard irregular tumour was felt occupying the right lower abdomen and reaching to the level of the umbilicus; it was moveable. Another hard moveable swelling, much smaller than that on the right side, was felt in the left iliac region (subsequently this proved to be a fibroid attached to the uterus). On vaginal examination the whole region in front of the cervix was found to be occupied by a hard swelling, evidently the uterus enlarged by fibroids. The mass was fairly moveable. The sound passed five inches.

The operation was performed on Oct. 28th. The patient was anæsthetised with the A.C.E. mixture and pan-hysterectomy was performed in the same way as described in the preceding cases. There were no adhesions. On Nov. 1st she was very well except for a slight cough which caused some pain in the abdomen. The abdominal sutures were all removed on the 6th and the wound was found healed by first intention. The abdomen was strapped. (I went out of town a few days after the operation before the stitches were removed and did not see her again for two or three weeks.) After the removal of the stitches the patient had an attack of coughing and two days later she vomited three times. On removing the dressings it was found that the abdominal wound had burst open and that the intestine was protruding through the wound. The intestine was returned within the abdominal cavity and a flat sponge was laid over it while three silkworm-gut sutures were passed through the abdominal wall; the sponge was then removed and the abdominal wound was re-closed. All this was done with careful attention to asepsis. The patient was fortunately none the worse for the accident. The new abdominal stitches were removed on the 25th and the wound was found to be healed. The vaginal gauze was removed on Dec. 3rd, but the vaginal ligatures not till the 9th. The highest temperature in the week succeeding the operation was 101° F. on one occasion, the evening of Oct. 29th. The patient left the hospital quite well on Dec. 11th, 1897.

Harley-street, W.

A CASE OF HÆMORRHAGIC INFARCTION OF THE SMALL INTESTINE DUE TO THROMBOSIS OF THE SUPERIOR MESENTERIC VEIN;

NECROPSY; REMARKS.

BY HAMILTON A. BALLANCE, M.S. LOND., F.R.C.S. ENG.,

ASSISTANT SURGEON TO THE NORFOLK AND NORWICH HOSPITAL.

ON July 2nd, 1898, I saw in consultation with Mr. Gallard of Norwich a married man, aged 68 years, a butcher by trade, who gave the following history. He had always enjoyed good health except that some 18 years previously he had suffered from an attack of jaundice which lasted for three weeks, in the course of which he was said to have passed a gall-stone. In his earlier life he had also been troubled with gravel but from this for the last few years he had been quite free. There was no history of either typhoid fever or rheumatic fever. It had been his custom to feed heartily, though not to drink to excess, and the bowels were always fairly regular. An umbilical hernia had developed during the last six years. For three or four days before the onset of his present illness vague and irregular pains were experienced in the abdomen, more on the left than on the right side, but not sufficient to prevent him being up and about at his usual occupation. On June 30th he went out driving in the afternoon and during the drive the pain came on rather severely; it was not localised in any particular part of the abdomen but was generally diffused. When he arrived home the pain was treated with hot fomentations to the abdomen and these were continued throughout the night. He took two rhubarb pills that evening. The abdominal pain caused him to pass a sleepless night. On July 1st, although feeling very ill, he drove out on business for about an hour before his breakfast. After breakfast sickness commenced and continued at frequent intervals up to the time when I saw him. The vomit was small in quantity, but there was much retching, and he brought up a great deal of wind. There was a slight action of the bowels in the morning. In the afternoon he took to his bed. On the 2nd an enema was given in the morning, but this was returned merely stained though accompanied by some flatus. A little blood was passed after the injection had been voided.

When I first saw the patient on the afternoon of July 2nd he presented the appearance of a sallow-complexioned very stout man weighing 17 st. and his aspect was one of intense weariness as if he had had no sleep for some days. Nothing had been passed by the bowel since the small quantity of blood subsequently to the administration of the enema in the morning. The tongue was dry, with a yellowish-brown fur down the centre. He was lying half propped up in bed and every few minutes would start up suddenly into the sitting posture and bring up some wind and a little foul-smelling brownish fluid, complaining at the same time of increase of abdominal pain which he would endeavour to ease by rubbing the abdomen with the hands. The pulse was small, extremely irregular in force and rhythm, with a rate of 120, not all the heart beats being felt at the wrist. There was no cardiac murmur. The temperature was 98° F., but the surface of the body felt cold. He was so ill that answers to questions were with difficulty obtained from him, most of the history being given by the friends. Great restlessness was present and he frequently groaned with the pain. There was slight œdema of both legs. The abdomen was full but not greatly distended. An inch or more of fat existed on its walls and an umbilical hernia was seen, two and a half inches in diameter, the contents of which were almost entirely reducible. Nothing definite could be detected in the abdomen; some general tenderness to pressure was present and, as I thought, rather more over the cæcum than elsewhere. When the attacks of pain came on intestinal coils could be seen distended in the hernia. He was at once conveyed to the Norfolk and Norwich Hospital, as it was thought that possibly an operation might be necessary in consequence of the signs of obstruction present, though the diagnosis was by no means clear. Some opium was administered per rectum before starting for the hospital.

On admission the retching and sickness stopped, but the restlessness continued and a three-pint soap-and-water enema came back only stained with fæcal matter but with a little blood in it. The urine was acid; its specific gravity was 1028; there was no albumin or sugar. At 8 P.M. the patient had a more acute attack of abdominal pain, throwing himself about the bed while it lasted. It was relieved somewhat by morphia suppositories. He slept for two or three hours during the night. On the 3rd, wind continued to be brought up at frequent intervals, but the patient was only slightly sick once or twice in the morning and once in the afternoon. No flatus passed during the day. The temperature since admission had been subnormal, ranging between the normal line and 96·6°. The pulse had been failing to-day. The abdominal distension had slightly increased. In spite of stimulants, digitalin, &c., he gradually became weaker and died at 10 P.M., the restlessness ceasing for an hour or two before death. After admission to the hospital, although the vomiting moderated the general condition was so grave and the pulse was so feeble and irregular that all idea of an operation was abandoned.

A necropsy was made on July 4th (14 hours after death). The whole body was loaded with fat, a thickness of one and

a half inches being seen in the abdominal walls. On opening the abdominal cavity a few ounces of blood-stained fluid escaped. Upon lifting up the great omentum a remarkable appearance was disclosed. The entire length of the small intestine, from the commencement of the jejunum to the cæcum, was dark, greenish-black, shiny, and distended, precisely similar to what is often seen in a severely strangulated hernia, and the contrast between this and the colon around—although the colon itself was slightly congested—was striking. The bowel wall was intensely engorged and thickened and the contents were deeply blood-stained. Lymph was not present upon it. The mesentery contained a great deal of fat and was also congested. In the upper inch of the superior mesenteric vein was situated a pale clot adherent to the walls and completely occluding this vessel. This clot was continued, tapering off and likewise adherent along the lower inch of the portal vein, but only partially blocking it; the rest of this vessel was free. The lower part of the superior mesenteric vein and all its radicles contained black, soft, non-adherent clots. The splenic vein was not thrombosed, the blood in this vessel having apparently been able to find its way past the clot in the lower end of the portal vein, and this accounted for the fact that the spleen was not notably enlarged. The mucous membrane of the large intestine as far as the sigmoid was much congested and here also there had been hæmorrhage into the lumen. No ulceration was found either in the small or large intestine. There seemed to be a commencement of the same condition in the large as was present in the small intestine. The inferior mesenteric vein and its radicles were filled with dark recent clots. The superior mesenteric artery was not thrombosed. The abdominal aorta showed some atheromatous plaques under the intima, but the lining endothelium was quite intact. The liver was intensely fatty and it weighed 3lb. 6oz. Microscopically fatty infiltration in the cells of the liver was very marked. The kidneys were normal in size but they were fatty. The pancreas was healthy. The lungs were greatly congested and œdematous. The heart was large; it was loaded with fat and weighed 1lb. 9oz. The walls were pale, soft, and very friable. The auricles contained decolourised clots. Under the microscope fatty degeneration of the individual muscle cells of the heart was easily recognisable.

I had collected some 35 cases of occlusion of the mesenteric veins and about 75 of occlusion of the mesenteric arteries, but during the last few weeks the sixth volume of "Allbutt's System of Medicine" has appeared with Professor Welch's admirable review of the whole subject of thrombosis and embolism, including that of the mesenteric vessels, so that any lengthy discussion on the subject here would only needlessly occupy space, and I merely publish the case as an example of very extensive intestinal infarction from aseptic thrombotic occlusion of the superior mesenteric vein. As regards the pathology of the thrombosis in this case, I believe it to be solely due to the extreme feebleness of the circulation, but as to the reason why the superior mesenteric vein rather than a vein of one of the extremities happened to form the site of the clot I cannot say. At any rate, there was no ulcerative or infective process going on in the bowel to give rise to a secondary thrombosis. So many of these cases are of an ascending type and originate from some inflammatory focus in the intestine; this one was, however, essentially descending in its development.

The diagnosis was replete with difficulty and it was much easier to exclude many of the suggestions given than to fix upon any individual diagnosis that would exactly meet the case. My colleague, Dr. Long, was nearest the mark with the suggestion of occlusion of the superior mesenteric artery. The factors in the diagnosis of the occlusion of the mesenteric vessels are given in the article previously referred to. The differential diagnosis between blockage of the artery and vein must be made on associated signs, such as cardiac failure, arterial disease, evidences of embolism elsewhere, &c., rather than on any distinctive differences which occur in the abdominal symptoms. Recognition of the condition generally takes place either at an operation for the relief of the obstruction or in the post-mortem room.

It will be noted that the pain in this case was very definitely of the nature of colic and that the diagnosis may erroneously be made of intestinal obstruction due to intussusception, especially if a little blood be voided by the rectum and an abdominal tumour composed of a congested and thickened intestinal coil with its mesentery be felt, as has been possible in a few cases. The collapse, vomiting, and diarrhœa occasionally present may simulate irritant poisoning.

The great extent of the bowel that underwent infarction is noteworthy. It is not always the case that the whole of the small bowel is affected even when the main trunk of the artery or vein is blocked. Although a rapid thrombosis of the portal vein may give rise to intestinal infarction, yet there are usually other significant factors when this vessel is occluded which enable one to differentiate it from a primary thrombosis of the superior mesenteric vein.

It was a matter of satisfaction that laparotomy was not performed on this patient, as it would obviously have been useless, but operation is the only hope which can be held out in those cases in which more than the mucous coat of the intestine is involved, and provided that it is done early and that only a few feet of gangrenous bowel need removal it may meet with success, as the results of Elliot and Gordon show.

Professor Welch gives a good bibliography at the end of his article, but there are some further cases appended here which he does not mention, besides references to a few cases of wounds of the mesenteric vessels which have recently been recorded.

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Norwich.

THE AFTER-HISTORY OF EXCISION OF THE ENTIRE BREAST.[1]

A RECORD OF 100 CONSECUTIVE CASES

OPERATED ON BY A. E. BARKER, F.R.C.S. ENG.,
PROFESSOR OF THE PRINCIPLES AND PRACTICE OF SURGERY AT UNIVERSITY COLLEGE.

BY J. E. SIMPSON, M.R.C.S. ENG., L.R.C.P. LOND.,
LATE ASSISTANT DEMONSTRATOR OF ANATOMY AT UNIVERSITY COLLEGE.

THE value of excision of the entire breast together with the removal of the axillary glands in the earlier stages of malignant disease as well as in some other forms of a morbid condition of the tissues is well exemplified in the following series of 100 consecutive cases operated upon by Mr. A. E. Barker. The cases investigated were treated between the year 1877 and February, 1898. An analysis of

[1] Being the Liston Prize Medal Essay of University College Hospital, London, session 1898-99. (By permission of the examiners and with Mr. Barker's approval.)

the causes for which removal of the entire breast was undertaken shows that scirrhus was by far the commonest condition.

The following table indicates also the other affections :—

Nature of tumour.	Number of cases.	Nature of tumour.	Number of cases.
Scirrhus...	82	Cystic adenoma	1
Colloid cancer	2	Duct papilloma	1
Scirrho-encephaloid ...	2	Chronic fibrosis	1
Duct cancer	4	Doubtful	1
Cystic degeneration ...	4		
Fibro-adenoma	2	Total	100

This gives a proportion of 90 malignant cases to nine of a simple nature and one doubtful. Considering firstly those who may be said to have died from the effect of the operation we find five cases come under this heading :—

No. of cases.	Cause of death.	Date of death.
1	Pyæmia	1878—3 months after operation.
1	Septicæmia	1880—1 month ,, ,,
1	Cellulitis	1888—8 days ,, ,,
1	Syncope	1894—9 ,, ,, ,,
1	Pleurisy	1895—4 ,, ,, ,,

With the improved knowledge of antisepsis and asepsis the causes of death in the first three cases have very rarely to be reckoned with now. The "spray" method was in vogue at the time of the first two operations. In the fourth case, a woman, aged 69 years, the wound had quite healed at the time of death. In the last case of the series the post-mortem examination revealed serous effusion into the pleural cavity with collapse of the lung on the same side as the operation. There was no evidence of any wound of the pleura, however. The after-history of the non-malignant cases may be summarised thus :—

Nature of tumour.	No. of cases.	Subsequent history.
Cystic degeneration	4	Two are alive and well at the present time, four and a half and two years respectively after operation; one died six months after operation from calculus and perinephritic abscess, and one was traced for seven years, up to which time no record of death was obtained.
Fibro-adenoma	2	Both well 16 and 15 months after operation, with no signs of recurrence.
Chronic fibrosis	1	Well 14 months after operation.
Duct papilloma	1	Well four and a half years after operation.
Cystic adenoma	1	Well nine years after operation; then was admitted to another hospital for malignant disease of the other breast.
Doubtful nature	1	Well three years after operation, and no record of death was obtained for a subsequent three years.

The tumour of doubtful nature consisted of a fibrous stroma with large loculi filled with cuboid cells and some larger cells with unstainable spaces in the middle. The loculi were lined with tall columnar cells. The glands from the axilla did not present any abnormal changes. The "lump" began to form four years previously and varied in size. The nipple was retracted and adherent to the tumour which also was adherent to the pectoral muscle and the skin. To palpation the mass was very hard and nodular and manipulation gave some pain.

Of the malignant cases duct cancer will be considered first. The number of cases is four. With regard to their after-history, two are alive and well at the present time, 10½ and seven and a half years respectively after the operation; one died from pyelitis three years and nine months after operation; and one was alive three years after operation but no record is obtainable subsequently.

The remaining cases include scirrhus, colloid cancer, and scirrho-encephaloid; these will be considered together. Of the total number of 86 cases 23 are alive at the present time, nine can be traced for periods ranging from three to 11 years, but no record of death can be found. The remaining 54 cases have died. Of those alive intervals of 11 years and seven months, 10 years and four months, six years, five years and eight months, five years and five months, five years and two months, four years and four months, four years, three years and two months, three years and two months, three years, two and three-quarter years, two years and one month, one year and 11 months, one year and 11 months, one year and nine months, one year and four months, one year and three months, and one year and one month have elapsed since the operation, whilst three others are alive after periods of 10, nine, and eight months and have no trace of recurrence. Two of this group of cases have recurrences after intervals of 20 and 16 months since operation. The patient free from recurrence for 11 years and seven months was at the time of operation 45 years of age. She had noticed a lump in the right breast for about five years which gradually became larger and at the time of operation was found to be of the size of a bantam's egg. The tumour was adherent to the skin but freely moveable on the pectoral muscle. The axillary glands were not sensibly affected to external palpation but at the operation were found to be extensively cancerous. The microscopic appearances confirmed the diagnosis of scirrhus. The second case of this series—who is alive 10 years and four months after operation—was 54 years of age at the time. She had noticed a small lump for three years. The nipple had been retracted for six months, the skin was involved, and the tumour was fixed to the pectoral muscle. The axillary glands were also affected.

Of the nine cases traceable for certain periods one was alive six years after operation with a small recurrence in the scar; no record of death was obtained for four years subsequently. Seven cases were traced with no record of death—namely, two for five years, one for four years, one for three and a half years, and three for three years, and one case cannot be traced.

Of the patients who died at various intervals after the operation one lived seven years and eight months, dying from recurrence; two lived six years and four months, one dying from recurrence and one from "sciatica" (there was no local recurrence); one lived six years, dying from "lung trouble"; one lived five years and two months, one four years and four months, one four years and one month, one three years and 11 months, and one three years and seven months, all dying from recurrence; three lived three and a half years, two dying from recurrence and one with symptoms of brain tumour; one lived three years, two two and three-quarter years, and one two years and eight months, all dying from recurrence; one lived two and a half years, dying from syncope; one lived two years and five months and one two years and two months, both dying from recurrence; three lived two years and one month, two dying from recurrence and one from "bronchitis" (probably generalisation); five lived two years, the cause of death being recurrence in all cases; one lived one year and 11 months, two one year and nine months, one one year and seven months, two one year and six months, and one one year and five months, all dying from recurrence; three lived one year and four months, two dying from recurrence and one from growth in the cord (no local recurrence); one lived one year and three months, one one year and one month, two 12 months, four 10 months, and three seven months, all dying from recurrence; and one lived three months and one two months, both dying from generalisation of the growth.

The remaining five cases which died from the effect of the operation have already been considered.

A summary of the causes of death gives the following: from recurrence, 43 cases (local recurrence, five cases; glandular, 14 cases; and internal generalisation, 24 cases); from "lung trouble," one case; from "sciatica," one case; from brain tumour, one case; from bronchitis, one case; from syncope, one case; and from growth in the cord, one case.

How far the various causes were but manifestations of the growth in other parts cannot be decided accurately in the absence of more definite details. The average duration of life in those dying from recurrence or some less certain condition is found to be 28 months and seven days after operation. Of the two cases of scirrho-encephaloid cancer one is alive five years and eight months after operation; a second operation for recurrence was undertaken 10 months subsequently to the first. This patient is apparently quite free from any other manifestation and is very well. The other patient lived three months. Of the two colloid

cases both died 24 and 18 months respectively after operation.

It should be mentioned that a microscopical examination of the growth has been invariably made in all cases of a suspicious nature or otherwise of doubtful appearance.

Only six cases were operated upon a second time. One lived five months after the second operation and 10 months after the first; one lived 18 months after the second operation and three years after the first; one had recurrence five months after the first operation, a second recurrence in the scar and glands occurred six months later, and a third recurrence took place in the scar 15 months after the third operation (no trace can be obtained of this case for three years subsequently); one had recurrence 17 months after the primary and died 13 months after the second operation; one had recurrence nine months after the primary and died nine months after the second operation; and one had recurrence in 17 months and lived three years and nine months after the second operation. These figures give an average duration of life equal to 18 months after a second removal has been attempted. The third case of this group is not taken into account in estimating the average.

In regard to the nature of the operation undertaken the almost invariable rule has been that the axillary glands and fat have been removed as widely as possible. The skin incisions have been free and the fascia carefully dissected off the pectoralis major muscle. In cases where the growth was at all adherent a layer of the muscle fibres was also removed, but the superficial fibres were not removed as a matter of routine unless the muscle was apparently involved by the growth. In a limited number of cases at the beginning of the series the measures adopted were not so thorough. Almost invariably for many years past the wound has been closed without drainage, perfect primary union being obtained in almost all. Dry dressings of salicylic wool have been used and not disturbed until the ninth day unless necessary. It is interesting to note that the left breast is affected rather more frequently than the right, corresponding with the experience of other operators. The duration of freedom from recurrence in those alive at present (March, 1899) is found to be 41 months and nine days as an average. These figures will be much below the correct average, however, owing to a great number having been treated comparatively recently and being still alive. If those of whom there is no record of death for certain periods are included the period is lengthened to 44 months and 23 days.

A brief summary of the number of patients alive at the end of successive years is as follows. Of the 90 malignant cases 70 were alive one year after operation, while three others were quite well after a shorter interval; 49 were alive two years after operation (five of these died almost immediately after this interval); 33 were alive three years after operation; 19 were alive four years after operation; 14 were alive five years after operation; eight were alive six years after operation; four were alive seven years after operation; three were alive eight years after operation; three were alive nine years after operation; three were alive 10 years after operation; and one was alive 11 years after operation.

Volkmann's suggestion that any case which remains free from recurrence for three years may be claimed as cured will be seen to be disproved by the foregoing figures, which prove that 11 cases remained well for periods up to and beyond three years, but subsequently recurrence in some form manifested itself.

Additional remarks.—In regard to the value of the evidence afforded by palpation of the axillary glands, in the case of the patient free from recurrence for 11½ years the glands were not apparently affected until at the time of operation a more critical examination revealed the fact that those lying with the axillary vessels were enlarged, and upon microscopic examination presented the appearance of carcinomatous infection. The value, therefore, of a thorough examination and removal of the glands cannot be overestimated even though they may appear uninvolved to external manipulation.

The varying degrees of rapidity of growth with different individuals are very marked throughout the series. To quote extremes, one patient presents a small nodule of recurrence in the scar six years after operation; this is removed and for four years subsequently there is every reason to believe that she has no further trouble. On the other hand, another case is operated upon and the wound heals, but death takes place from generalisation in two months. This last case may be considered in other ways, however, in that the tissues may have already been involved generally at the time of operation, but in such a way as to give no signs or symptoms. Age, too, shows its influence very markedly. The former observations to the effect that those over 60 years of age as a rule were less favourable subjects for rapid growth than those under that age are found to hold good in this series. In a very few cases, however, those who were under 40 years had a prolonged period of freedom from recurrence or had no recurrence at all.

Discussing the utility of operative procedures in individual cases one must of necessity take into consideration the nature of the growth, its degree of involvement of tissues, its duration, and the age and health of the patient. Although the average duration of life in those dying from a recurrence is two years and three months, yet one must not lose sight of the fact that individual cases may have a much shorter period of life, whilst the more cheering prospect of a complete freedom from recurrence should, on the other hand, be reasonably looked forward to in cases which are treated early. The only two cases of the scirrho-encephaloid form of the malignant affection show that although it is usually held to be a more rapidly fatal form, yet one patient is alive five years and eight months after the operation. The freedom from recurrence after a second operation seems to bear some relation to the time elapsing between the first operation and the reappearance of the disease. In most of the six cases under this heading the second period was about equal to that between the first and second operations. One case, however, lived three years and nine months after a second operation, which was undertaken 17 months after the first. These points, although no absolute freedom from recurrence can be claimed after any second operation, would very strongly indicate that second operations are to be advocated.

The much-disputed question as to whether cancer is a general infection of the system with a local manifestation or merely a local disease primarily cannot be entered into here. From the observation of these cases there is to my mind much to be said in favour of the general infection theory; but notwithstanding this it is seen that the thorough removal of the active focus of disease has led in many cases to a complete immunity from further trouble for a very prolonged period of nearly twelve years in one case and for shorter periods in others. The subsequent history of these cases will be followed with great interest, so that the lapse of time may add to our little store of knowledge about the value of excision of the breast as a means of combating this very common condition which causes so much suffering.

PARTIAL DISLOCATION OF THE SPINE.

BY W. BALFOUR FERGUSSON, M.D. ABERD.

THE infrequency of this accident and the rarity of the conditions found on this occasion are a sufficient plea for requesting the insertion of the following notes in THE LANCET.

At midnight on June 17th I was called to see a labourer It appeared that he was working away from home and was in the habit of returning every Saturday night. On the evening in question he was returning home in charge of a horse and cart and, probably overcome by a week's hard work in the hayfield, he fell asleep while sitting on the edge of his cart. The horse feeling itself free bolted, precipitating the man to the ground, he falling on the back of his head. Two men attracted to the spot by the noise of the runaway horse found the unfortunate man lying on the ground groaning and complaining of his neck, and believing him to be under the influence of drink they somewhat ruthlessly dragged him home. I have it from the two men that he was sensible when they found him, that he asked for his watch which had fallen out of his pocket, and that he walked home with their assistance, a distance of a quarter of a mile. On reaching his house I endeavoured with a very imperfect light to elicit the exact nature of the injuries. I may say at the outset that I believed him to be perfectly sober and this has since been verified by his employer. I found the patient sitting on a chair with his head well bent backwards and resting against the wall. His skin was cold and clammy; his

breathing was diaphragmatic; his pulse was soft, slow, and compressible; and his pupils were dilated and did not readily react to light. He had partially lost power in his arms and legs and he appeared to be dazed. His head was inclined backwards, the occiput resting on the spine. The front of the neck was distended and swollen and the vessels were engorged. The moment I tried to move the neck he was thrown into a violent spasm, the spasmodic contraction lasting a few minutes, the patient calling out all the time "Oh, my neck!" It was difficult to know quite what to do, but observing that he was becoming worse I had him carried upstairs to bed. This movement caused continuous spasmodic contraction of the arms and threw the neck and chest into a state of marked rigidity, the head all the time being forcibly bent backwards on to the spine. As the poor fellow appeared *in extremis* and considering the case one of partial displacement of the cervical vertebræ I resolved to try to reduce it. Securing the assistance of the parish nurse (who is, by the way, an unusually strong woman) and placing her in front of the patient I directed her to take both his hands and to pull him directly upwards. I placed myself behind and supported his head and pressed his shoulders forwards. So great was the spasm produced by this attempt that the nurse was forcibly drawn across the bed and I was pressed backwards against the iron framework at the top, the poor fellow calling all the time, "Oh, my poor neck. Doctor, I am dying!" I as quickly as possible got him again into the sitting position and placing my left hand underneath his chin and my right behind the nape of the neck I jerked the head upwards, at the same time forcibly bending the head forwards over the chest. A sensation of a bone slipping into its place was communicated to the hand and I felt certain that a dislocation had been reduced. On gently laying him back on the pillow he exclaimed: "Oh, my head is going up!" and to all appearances he looked as if he were dying. In a very few minutes he opened his eyes and said, "I feel better."

It may appear that I have entered too much into minutiæ, but the case appeared to me so extraordinary and the symptoms so puzzling that a detailed account of them may not be out of place. It is obvious that dislocation of these bones must of necessity be rare considering the way in which they are closely bound together by strong ligaments and short, powerful muscles. When dislocations do occur they are almost invariably associated with fracture. The exact seat of the displacement in this accident was difficult to determine, but the probable site was between the fourth and fifth cervical vertebræ. Such a condition between the occiput and atlas is almost unheard of. Between the atlas and axis the odontoid is almost invariably fractured, death quickly ensuing. Between the second and third cervical vertebræ such a condition is not on record. The most common site of this displacement is between the fourth and sixth cervical vertebræ, and this accident is almost invariably complicated with fracture, though it does rarely happen without this complication. Two weeks have elapsed since the accident and the patient is now out of doors and walking.

Painswick, Gloucestershire.

A CASE OF TETANUS TREATED BY INTRA-CEREBRAL INJECTION OF ANTI-TETANIC SERUM.

BY THOMAS D. GIMLETTE, M.R.C.S. ENG.,
FLEET-SURGEON, R.N.

A MAN, aged 23 years, A.B. of H.M.S. *Duke of Wellington*, a fine young seaman of good physique and of very good previous health, was admitted into the Royal Naval Hospital, Haslar, for observation on the evening of May 3rd complaining of pains at the back of the neck between the shoulders and along the course of the spinal column, also of being unable to open his mouth on account of rigidity of the muscles of the jaw. He was found to have wounded his left ring finger a week previously with a piece of broken teacup and the wound had not healed. The temperature was normal, the pulse was 88, and the respirations were 22 per minute. The bowels had not been open for two days. The tongue was moist and clean, but there was a peculiar offensive odour from his breath. He was given a purgative and 40 grains of bromide of potassium in two doses. On May 4th he had slept well and his bowels were open. The rigidity of the masseter muscles was more marked and the muscles of the abdominal wall were rigid. The pulse was 80, full, and hard. A diagnosis of tetanus was made. 10 grains of chloral hydrate and 15 minims of tincture of hyoscyamus were added to the 20 grains of bromide of potassium and given every three hours. On May 5th the symptoms became more marked and risus sardonicus was noticed occasionally. The mouth could be opened only three-quarters of an inch. Saliva collected in the mouth and could not be expectorated. Rigidity of the abdominal muscles increased and clonic spasms came on in them which gave rise to much pain and distress. There was inability also to swallow solids, but milk was taken easily. A consultation on the case was held and it was considered that it was a suitable one for treatment by intracranial injection of serum, after the method of M. Roux and M. Borrel of Paris, first performed in this country by Major D. Semple, R.A.M.C., of Netley. The operation was performed with the strictest aseptic precautions, the sterilisation of the needle with which the injection was made being most carefully carried out and the patient's head being shaved and scrubbed. An imaginary line from the root of the nose to the occipital protuberance was taken, another from one external auditory opening to the other, and a third from the point of intersection of these to the outer angle of the left orbit. At the centre of this third line an incision half an inch long was made down to the bone. The skull was then drilled with a specially constructed drill which, being provided with a stop, could penetrate bone and dura mater only. Through the hole thus made a serum injection needle three inches long, having the point rounded so as to avoid injury to the cerebral vessels, was introduced into the brain substance, being directed towards the spinal column. The injection syringe was so constructed that 2·5 cubic centimetres of concentrated serum could be injected and no more. The "concentrated" serum was made by inspissating 10 cubic centimetres of ordinary anti-tetanic serum to dryness; the dry serum was kept aseptically until required and then dissolved before use in five cubic centimetres of sterile normal saline solution. The process of dissolving cannot be hurried and takes one and a half hours; the normal saline aids the solution of some of the globulin which is practically insoluble in distilled water. The injection was made very slowly, 10 minutes being occupied in injecting 2·5 cubic centimetres, and while the injection was being made the needle was held perfectly steady by an assistant to prevent any laceration of brain tissue. After its completion the needle was withdrawn and the small wound closed by one horsehair suture and sealed with collodion. The operation was then repeated in a precisely similar manner on the right side, five cubic centimetres of the concentrated serum, corresponding to 10 cubic centimetres of ordinary anti-tetanic serum, being thus given intra-cerebrally. A subcutaneous injection of 10 cubic centimetres of ordinary anti-tetanic serum was given under the skin of the abdomen in the right flank. The original wound was thoroughly scraped by a Volkmann's spoon, the scrapings being received in a sterile tube for cultivation of the bacteria. The special instruments necessary for the operation were lent to me by Major D. Semple, R.A.M.C., who also was kind enough to assist at the operation. I have much pleasure in expressing my thanks to this officer.

On May 6th the patient passed a fairly good night. There were no vomiting and no clonic spasms; he was taking milk and beef-tea well. The temperature was 100° F. and the pulse was 104, very hard and bounding. The mouth could only be opened half an inch. The abdominal muscles were very strongly contracted. The least noise causing spasm of the masseters, and light being also displeasing, the patient was moved to a darkened room and a special nurse was provided for him. He had a quiet day up to 6 P.M., but then began to suffer from severe clonic spasms, frequently recurring, lasting about half a minute, the muscles affected being those of the lower jaw and abdomen. The teeth were tightly fixed during the attacks and the pulse became rapid (120), full, and hard. Paroxysmal tachycardia came on and the heart sounds were easily audible at a distance of two feet from the patient without a stethoscope. At 9.30 P.M., the patient being in much distress and pain, a subcutaneous injection

of five minims of solution of hydrochlorate of morphia was given, after which he slept for one and a half hours, but was awakened by very marked and violent attacks of opisthotonos with tachycardia as before. He was given subcutaneously 10 cubic centimetres of anti-tetanic serum and a draught of 25 grains of bromide of potassium and 20 grains of chloral hydrate. He slept fairly for the remainder of the night. On May 7th he had a severe attack of opisthotonos at 6.30 A.M. At noon 20 cubic centimetres of serum were given under the skin of the abdomen. This treatment was continued every day until May 15th, 200 cubic centimetres being given subcutaneously in all as well as the five cubic centimetres of concentrated serum intracranially. During the whole day (May 7th) he had attacks of clonic spasms of varying degrees of intensity from severe opisthotonos to transient risus sardonicus. A spasm was caused by the subcutaneous injection, also by the noise of gun-firing at Spithead, or by the patient passing urine. A slight noise while the patient was asleep would cause risus sardonicus without awakening him. Tachycardia always occurred during the violent spasms, profuse action of the skin followed them, and also a more rapid respiratory action. Towards evening the patient seemed to become worse, he was in great distress, and said he thought that he was going to die. A bromide and chloral draught was given at 9 P.M. and at 11 P.M., as he had not slept and was in great pain, a subcutaneous injection of three minims of liquor morphinæ hydrochloride was given, after which he had a fairly quiet night. The patient took fluid food well. On May 8th at noon he had had three attacks of clonic spasms since 8 A.M., more in the shoulders and neck than in the trunk muscles—not opisthotonos. He said that he felt better but for pain in the back of the neck. The bowels not having been moved since the operation were well emptied by an enema. The temperature kept at about 100° and the pulse was 96 and not so hard as it was. The spasm caused by the serum injection was not so violent, not amounting to opisthotonos, but all the muscles of the body appeared to be affected and the arms and legs; those of the shoulders and arms and lower jaw were most affected, so that the patient lay on his back with both arms extended over his head, with trismus and risus sardonicus marked during their occurrence. He was able to swallow well, taking five pints of milk, three pints of beef-tea, and one raw egg in the 24 hours. There was slight delirium at night. From this date there was a gradual improvement in all the symptoms. The patient could open his mouth wide and put out his tongue for the first time on May 15th, and having had no clonic spasm for 24 hours the serum injection was discontinued on the 16th. From the 17th to the 20th he was troubled by spasmodic attacks of cough of laryngeal character and had occasional attacks of sneezing. He began to take solid food on the 15th and sat up out of bed on the 17th; he was allowed out in the grounds on the 28th and was transferred to a general ward on May 31st. He had still on June 2nd some stiffness of the lower jaw, some pain and stiffness of one arm, and the abdominal muscles still felt resistant, but not so board-like as they were. These symptoms had all disappeared on June 21st, when he returned to duty. On July 4th he still remained perfectly well.

Remarks.—The diagnosis of tetanus was in this case confirmed by the isolation of the bacillus from cultivations from the wound scraping by Major Semple, R.A.M.C., at Netley, and also by the finding of it in cultivations made from the first dressing of the wound by Staff-Surgeon O. W. Andrews, R.N., at Haslar. Judging from the severity of the symptoms of the case before operation and also for the two days immediately following the operation it may fairly be stated that, humanly speaking, but for the serum treatment this patient must inevitably have died. No "brain symptoms" have followed the introduction of the long needle and injection of serum into the brain substance—in fact, the patient made a steadily progressive and perfect recovery. The operation was carried out exactly after the manner of M. Roux and M. Borrel of Paris and the case is a striking example of the efficacy of the treatment introduced by them.

THE CHELSEA HOSPITAL FOR WOMEN.—This hospital will be closed to in-patients from the middle of July to the end of September in order to permit of certain improvements being carried out. The out-patient department will be closed during August only. An appeal is being made for public assistance towards defraying the cost of the alterations.

CHINOSOL IN PHTHISIS.

BY ALEXANDER MACGREGOR, M.D. ABERD., M.R.C.P. LOND.,
PHYSICIAN TO THE NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.

WITHOUT having good grounds one hesitates to add to the long list of remedies already employed in the treatment of phthisis, but while waiting for the discovery of a pure and reliable tuberculin it is justifiable to give a fair trial to any drug which may possibly help the patient to carry on a more or less successful fight with the disease. Other micro-organisms than the tubercle bacilli play a very important part in the destructive morbid processes which take place in the lungs in consumption, and it seems to me that it is against those other microbes that the drugs now so much used in phthisis exert their antiseptic or germicide action. In the light of the bacteriology of phthisis—in the light of the fact that in most cases of phthisis we have to do with "a pulmonary sepsis on a tubercular basis"—we can understand the use of such drugs as creasote, guaiacol, &c., being followed by good results. I think it is evident that those drugs do not act directly on the tubercle bacillus, but by their action on the other micro-organisms and their products they bring about an improvement in the general condition of the patient and so increase his power of resistance; and then, given suitable hygienic surroundings and other favourable circumstances, the tuberculous process is likely to go on to fibrosis and to thus cure itself.

Dr. A. G. Cipriani[1] records eight cases of tuberculous disease, three of them being cases of pulmonary tuberculosis, treated with chinosol. He gave one gramme in 24 hours and he was satisfied that improvement followed the administration of this drug. I have now used it in more than 100 cases of phthisis and I am satisfied that I have had better results than ever I had from creasote or guaiacol. Chinosol is the oxyquinoline sulphate of potash; it is a powerful germicide, but it does not seem to be much used as an ordinary antiseptic. Taken internally it is well borne in doses of five grains three times a day after food. In two cases it caused diarrhœa and on that account had to be discontinued, and in one case in which the larynx was involved it gave rise to a very painful sense of burning, even when much diluted, and so was not persevered with. In almost every case improvement in the patient's general condition follows the use of the drug. "I feel so much better in myself," is the usual report and it is naturally concluded that this is due to the action of the chinosol on the associated micro-organisms and their toxic products. In many decided improvement in the condition of the lungs was the result and in several all adventitious sounds disappeared and recovery seemed to have taken place. The following are short notes of a few of the cases in which chinosol was used and in which I was able to watch the effects of the treatment.

CASE 1.—A woman, aged 29 years, was first seen on Nov. 11th, 1898. She had been ill for 18 months, and 12 months, and also a week, before her visit there was hæmoptysis. She complained of pain in the upper part of the chest on the right side, of cough, and of loss of flesh. There was dulness over the apex and upper part of the upper lobe of the right lung and numerous crepitant râles were heard over the affected part. The left lung was normal. A small cantharides blister was applied to the chest and three grains of chinosol were given three times a day after food. When the patient was seen a month afterwards there was great improvement in the condition of the lung, the breath-sounds were almost normal, and only an occasional râle was to be heard. She said that she now felt very well. A fortnight later it was reported that she no longer coughed and that she still continued to feel well. On Jan. 20th, 1899, the note in the case-book says: "She feels perfectly well and looks a picture of health. Beyond slight dulness over the right apex nothing abnormal can be detected." She continued to take chinosol up to the beginning of March, but during the fortnight following that she seemed to have caught cold and there was a return of the râles over the right apex and a few were also heard over the left. Chinosol was again given and the râles disappeared. I am inclined

[1] Allgemeine Medicinische Central-Zeitung, No. 75, 1897.

to think that the chinosol was left off too soon, but the result when it was repeated was instructive.

CASE 2.—A girl, aged 16 years, was first seen on Sept. 5th, 1898, and she then stated that she had been ill for six weeks. She complained of cough, expectoration, loss of flesh, and occasional night-sweats. Crepitant râles, most numerous after coughing, were heard over both apices. She was ordered to take five grains of chinosol three times a day. A month afterwards the râles had practically disappeared from the left apex, but were still numerous in the right, over which a cantharides blister was now applied. A fortnight later she reported herself to be much better; the appetite had improved and she had gained 2 lb. in weight. She continued to increase in weight and to improve generally up to the beginning of December when the treatment was neglected and the result of participating in the festivities of the Christmas season and indulging in late hours was a severe attack of dry pleurisy in the left side. She was seen and examined on Jan. 17th, 1899, when no adventitious sounds were heard over the right apex, but the breathing was somewhat tubular in character and all over the left axilla harsh friction was heard. At this time she lost 4 lb. in a week. She recovered fairly rapidly from this attack and continued to improve steadily. On March 28th the note of her case says: "Very great improvement has taken place in the lungs and in the patient's general condition. Nothing is now detected in the left axilla and only one or two soft rumbling sounds are heard in the right supraspinous fossa; no adventitious sounds are heard over the front of the right lung." At this date she weighed 8 st. 8 lb.; in August last year she weighed 7 st. 11 lb. She was last seen on May 5th and she seemed quite well. No adventitious sounds were heard in the lungs and she was allowed to resume business. This patient's younger sister has come under my care. Her left lung at the first examination was crepitating from base to apex and she is taking chinosol apparently with benefit.

CASE 3.—The patient, a lad, aged 18 years, was first seen on April 22nd, 1898. There was dulness with tubular breathing over the apex and the upper part of the upper lobe of the right lung, and crepitant râles were heard after coughing; râles were also heard in the axilla of this side and over the base there was creaking with diminished breath-sounds. The left lung was normal. He was put upon chinosol and he remained under treatment for seven weeks, at the end of which time he felt so well that he did not think it necessary to continue the treatment. He appeared again as an out-patient on Jan. 24th, 1899. He had then been ill for a week; he complained of weakness, and the cough was troublesome. The right lung was found to be crepitating from base to apex. Five-grain doses of chinosol were ordered and in the course of two months he improved immensely, the only things to be noted about the right lung at the end of that time being a doubtful crackle at the apex and that the breath-sounds at the base were still fainter than normally. He was seen on May 5th and seemed then to be perfectly well; no adventitious sounds were heard in the right lung. He was last seen on May 30th and was then free from all signs and symptoms of active disease.

CASE 4.—A woman, aged 32 years, was first seen on Jan. 17th, 1899. She had been ill off and on for seven years and she complained of cough, expectoration, and breathlessness. Her nights were much disturbed by fits of coughing. There was excavation of the upper lobe of the right lung and the left lung was crepitating from base to apex. Chinosol was given three times a day and iodine was applied externally to the chest. Five weeks later the note in the case-book says: "Lungs are very much improved. The patient says that she feels ever so much better, the nights are much better, but the cough is now and again troublesome." This patient is still under treatment and the disease seems to be checked.

CASE 5.—A man, aged 43 years, was first seen on Feb. 28th, 1899, and had then been ill for three weeks. He complained of pain in the chest, troublesome cough with little expectoration, loss of flesh, and general weakness. There was retraction of the chest wall over the upper lobe of the right lung; the note was dull and crepitant râles were heard over the apex. The left lung was normal. Chinosol in five-grain doses was given and iodine was applied externally to the chest. At the end of a fortnight he felt much better and the cough was much less troublesome. He continued to improve, but after a time he ceased to attend and was lost sight of.

CASE 6.—A young man who had been ill for several months and who had a few days previously left the hospital where he had been for nine weeks appeared as an out-patient on May 5th, 1899. Creaking sounds and crepitant râles were heard all over the left lung and he complained of shortness of breath, troublesome cough, and expectoration. In a fortnight after taking chinosol, there was a decided improvement in his condition; he felt better and in the left lung only an occasional creaking sound was to be heard. The improvement in the condition of the lung was striking. This patient was seen and examined on June 2nd, and it was found that the condition of the affected lung was still satisfactory; the expectoration was very slight and only occurred in the morning. He said that he felt himself to be ever so much better.

In the out-patient department of a hospital it is only in the case of a few of the patients that one can carry out prolonged observations as to the effects of treatment. Many of them are soon admitted into the hospital, others cease to attend after their distressing symptoms are relieved, while others are irregular in their attendance or after a few visits seek advice elsewhere. But from the observations which I have been able to make on the action of chinosol in pulmonary affections I am convinced that it is a valuable drug in the treatment of phthisis. In the case of adults five grains seem to be a sufficient dose, but owing to its very pungent taste care must be taken in the dispensing of the drug. In a delicate boy aged 13 years crepitant râles in the apex of the left lung rapidly disappeared under two grains three times a day. A girl, aged 13 years, the daughter of a woman who was suffering from Addison's disease, had crepitant râles over both lungs. She was given three-grain doses and after a few weeks the lungs became perfectly clear, but in her case the dose was probably too large, because after each dose she experienced certain vague sensations accompanied with slight trembling which, however, very soon passed off. In a few cases of advanced and extensive disease no improvement followed the use of the drug. A woman, aged 24 years, whose left lung was affected from base to apex took chinosol for two months without any improvement in the condition of the lung; and in the case of a man, aged 23 years, with both lungs extensively affected the note made after a month's treatment was: "No better; cough very bad; night-sweats profuse."

Queen street, Berkeley-square.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib iv. Proœmium.

ANCOATS HOSPITAL, MANCHESTER.

TWO CASES OF ABDOMINAL SURGERY.

(Under the care of Mr. E. STANMORE BISHOP.)

THERE are few questions in abdominal surgery about which more opinions are held than drainage. Undoubtedly drainage after abdominal operations is being less and less resorted to every year and this is chiefly owing to a recognition of the fact that in the majority of cases it can do no good, while it serves as a possible entry for micro-organisms. The effusion of lymph rapidly shuts off the area around the tube or gauze from the general peritoneal cavity and quickly limits the area drained, but it is probable that for a few hours at least the drainage is effective. Many operators feel that in septic cases drainage is essential to recovery, but if virulent micro-organisms are present drainage will probably be valueless. It has been suggested by several surgeons, by Penrose among others,[1] that when an abscess is ruptured in the course of an abdominal operation the pus should be examined at once bacteriologically and that if micro-organisms are found drainage should be employed. After

[1] American Gynecological and Obstetrical Journal, August, 1896.

making due allowance for all the arguments advanced against it there are certainly cases in which drainage by tube or by gauze is of very definite value and for the surgeon to refuse to avail himself of this mode of treatment would be to deprive himself voluntarily of a useful aid. The drainage should not be continued too long, for the chances of further peritoneal infection and of a subsequent ventral hernia are greatly increased by the prolongation of the drainage.

CASE 1. *Sloughing myoma; hysterectomy by the combined method; recovery.*—The patient who was sent to my private home by Dr. Parkinson, was 65 years of age; she had been married for 43 years and had had seven children and two miscarriages. All the confinements had been difficult, requiring the use of forceps; the last confinement which occurred 27 years ago was the most difficult of all. Menstruation had commenced at the age of 19 years and had always been painful, there being pain during the period. Menstruation had ceased at the ago of 60 years, but had been irregular for the previous six years. Eight years ago a fibroid polypus had been removed by a well-known gynæcologist. From this the patient had been suffering for over 12 months previously; she was well afterwards for a few weeks, but then pain returned, especially on urination. She had been suffering more or less ever since. As she had suffered so much at the time of the removal of the polypus she had refused to see anyone until recently, when pain and foul discharge rendered her life unbearable. The offensive smell and discharge had been in existence for about five years. Latterly, after seeing Dr. Parkinson, and in consequence of vaginal applications by him, the smell had disappeared for a day or two but had always returned. On examination on April 23rd, 1899, it was found that the os was widely dilated, foul-smelling, cheesy débris mixed with brown, watery fluid escaping. The vagina and the skin around the vulva were excoriated. The smell suggested carcinoma. There was a small bedsore. The uterus was large, being of the size of the adult head, and mobile, with small, rounded bosses projecting into both broad ligaments. There was no infiltration into either of these. The tubes were apparently normal. The patient was coughing a great deal, there being some bronchial catarrh. The temperature on admission was 102·6° F., but on the next day fell to normal and fluctuated from this point to 100·8° each day until operation. She looked "septic." The pulse during this point ranged from 96 to 100 and the respirations from 24 to 32. Some doubt was felt as to the fitness of the patient to undergo a severe operation, but after waiting for a week it was evident that the worst symptoms were arising from septic poisoning and that the only chance for her was the removal of the source of sepsis. An operation was performed by Mr. Stanmore Bishop on April 27th; Mr. Wilson administered the anæsthetic and Dr. Parkinson assisted. With the patient in the lithotomy position the bladder was separated off as far as possible; the size and prominence of the fibroid bosses prevented this from being complete from this position. Douglas's pouch was apparently opened; the finger felt the back of the uterus and was in the free pouch. The broad ligaments were tied on both sides sufficiently far up to include the uterine arteries. The cervix was stuffed with gauze and sewn up. Five forceps were left on the posterior vaginal wall which bled freely. The patient having been placed in Trendelenburg's position the abdomen was opened. The left tube was tied and divided near the uterine cornu. The uterus was seized by strong forceps and drawn to the opposite side. As soon as it was seized it tore and foul débris escaped. This was caught on sponges which were packed around. The uterus was seen to be adherent behind by a broad but thin adhesion which covered in Douglas's pouch. This was divided. In separating the bladder above from the uterus the latter was torn again; the whole uterine tissue appeared to be friable. The opposite tube was divided and the uterus was removed. Considerable hæmorrhage persisted from the veins about the edges of the broad ligaments and as the patient was becoming collapsed several forceps were left on the veins and protruded through the abdominal wound. A gauze drain was drawn through into the vagina, the peritoneum was cleansed by sponging, and the abdominal opening was sewn up by tier suture to and around the forceps. No attempt was made to close the pelvic peritoneum. The forceps were packed between and around by chinosol gauze. The whole was covered by gauze, wood wool, cotton wool, and a many-tailed bandage. Half an hour afterwards the pulse was 108 and very weak; it sank to 92 in four hours and was steady and full. Vomiting of brownish but not offensive material, with much straining, came on soon after the return of consciousness and persisted in spite of inhalations of vinegar, applications of mustard to the epigastrium, cocaine, and hot tea (sips). Notwithstanding great thirst the patient was kept without food or any amount of fluid for 48 hours, reliance being placed upon nutrient enemata with brandy and suppositories. There was some flatulence. Cocaine in this case appeared to increase the sickness and three hours after the operation the vomited material was streaked with blood. A catheter was passed seven hours after the operation, five ounces of urine being removed. During the following night she had three hours' comfortable sleep but on awaking she was much troubled by sickness and flatulence. The bowels were moved once after a nutrient enema (? return). On the 28th (the second day after the operation) there was rather an alarming collapse from which she rallied. The pulse was 116. One grain of calomel was given every hour. The patient passed urine naturally in the afternoon and also flatus per anum. The administration of Benger's food, peptonised milk, and brandy was commenced at 10.30 P.M. The vomiting ceased and she slept for three and a half hours. On the 29th all the forceps were removed, there being no bleeding. The lower part of the abdominal wound smelled foully and parts were covered by blackish slough. During the previous night a very foul smell and discharge came from the vagina. The patient again required the catheter. She passed flatus several times and urine was passed involuntarily. She was very exhausted during the afternoon. It was very difficult to induce her to take food. During the night the temperature was 97° and the pulse was 116. On the 30th the patient had had a very restless night and looked flushed and ill. The vaginal drain was removed and the vagina was douched. The abdominal wound was mopped out with a strong solution of carbolic acid and hot boracic compresses were applied, being changed every five hours. There was no abdominal rigidity. The pulse was 116, missing a beat occasionally. There was still some sickness with much exhaustion. The temperature was 97°. The bowels were slightly moved during the night, the motions being light in colour and very offensive. The patient slept for rather more than four hours. On May 1st her general appearance was improved. A pill of mercury, hyoscyamus, and colocynth was given, being followed by Apenta water; this pill was repeated at night. In the afternoon a great deal of pus came from the abdominal wound which was very offensive. The gauze was removed from the vagina. Urine was frequently passed involuntarily. On the 2nd the patient passed 12 stools which were very offensive and becoming fluid; four more stools were passed during the night. On the 1st the fluid used to irrigate the vagina returned nearly clear, but on the 2nd the material brought away was foul and the irrigation was repeated three times. No gauze was placed in the vagina after the removal of the first. The abdominal wound at its lowest part from which the forceps had been removed had always been filled with a black offensive slough. On the 1st the upper portion of the wound showed signs of infection. Some of the skin sutures were removed, revealing a black offensive layer over the subcutaneous tissue and undermining the skin but not penetrating the fascia. All the surfaces were touched with pure carbolic acid and were powdered with glutol. Hot boracic compresses were applied over all. On the 2nd all the skin sutures were removed and the whole surface down to the muscular wall was similarly treated. On the 3rd the skin had separated widely, its edges being reddened for one-eighth of an inch outside the cut edge, but the sloughy surface was cleaning except at the lower angle of the wound which was still filled with black slough. The whole was not now so offensive as at first. There were no rigors. The patient was eating fairly well and the temperature was not above 99°. On the 5th the upper surface of the wound was clean and covered by healthy granulations. It was brought together by broad strapping. Fluid injected per vaginam escaped freely from the lower end of the abdominal wound. On the 6th another inch of the upper part of the wound was brought together by strapping. The lower angle of the wound was now clean, a fair amount of slough having been removed by scissors. For the past three days the patient had been able to lift herself in bed so as to assist in dressing. She was taking food well. On the 7th fluid ceased to come through the abdominal wound on douching the vagina. The bowels now

acted more regularly. The fomentations were stopped and a dry dressing was substituted. From this time onward recovery was steady, the discharge from the abdominal wound and vagina was perfectly sweet and gradually decreased, the temperature became normal, and the patient returned home on May 30th.

CASE 2. *Large multilocular ovarian cyst; abdominal cœliotomy; recovery.*—A married woman, aged 30 years, was admitted into the Ancoats Hospital on June 6th, 1899, having been sent by Dr. Robert Bishop. Menstruation had commenced at 17 years of age; it was painless and had been regular except for one period of five months due to anæmia. The patient had been married at 26 years of age and had had no children or miscarriages. Swelling of the abdomen had been noticed for the last three years, being at first attributed to pregnancy. Menstruation ceased for two years and then returned for a few months to cease again. In June, 1898, there was a slight flow for the last time. There were no other discharges and there was no vomiting. The patient had taken food well up to the past few weeks. The bowels had acted regularly without medicine and urination had been free and easy. She had lost flesh for the last 12 months. On admission the patient was seen to be a thin dark woman with the characteristic emaciation of the arms, legs, and chest contrasting with greatly distended abdomen. There was some dilatation of the abdominal veins. The cheeks were flushed. The hands showed the metacarpals. The patient lay habitually on her left side so as to support her abdomen against the bed. She could not lie on the back; if she attempted to do so she became breathless and felt pain over the sacrum. There were no bedsores. The measurements of the abdomen were as follow: from the sternum to the umbilicus and to the pubes, 11 inches and 22½ inches respectively; from the umbilicus to the right and left anterior superior iliac spines, 14½ inches and 12½ inches respectively; and the circumference at the umbilicus, 42½ inches. The heart and lung sounds were normal. The urine was of specific gravity 1020, being acid and containing a trace of albumin. On June 13th an operation was performed with the patient in the dorsal position. At first a small incision was made below the umbilicus, giving exit to clear serous fluid. The tumour was tapped; only a slight amount of glutinous fluid escaped. The trocar was directed upwards, downwards, and to the sides, but failed to pierce any considerable sac. As the bulk of the tumour was evidently composed of semi-solid material the incision was prolonged upwards and downwards until it extended from the ensiform cartilage to one inch above the pubes. The tumour was lifted upwards and outwards and in so doing was torn below near the rectum where in Douglas's pouch it was afterwards seen to have been adherent. A free flow of greenish brown fluid into the abdominal cavity took place. For a short time an attempt was made to absorb this by sponges, but this was quickly seen to be useless and all efforts were directed to remove the growth as soon as possible. The tumour sprang by a broad attachment to the left ligamentum latum and there were other broad attachments to the sigmoid flexure. From the latter there was very free hæmorrhage and some time and trouble had to be expended in securing the retracted vessels. The omentum was also adherent to the right side of the tumour by an attachment about four inches broad. This was clamped, divided, and left until later. On sponging out Douglas's pouch (no irrigation was used) several flakes of thick lymph were found adherent to the surface; some of these were left. There was still a tendency to some sub-peritoneal hæmatoma on the left side. The cavity was rapidly cleansed with sponges and as the patient was somewhat collapsed Dr. Jackson introduced about two pints of hot saline solution by submammary transfusion. Meanwhile the long incision was sewn up by tier suture and entirely closed without drainage. The abdominal wall when closed was scaphoid. Towards the end of the operation hot pads were packed around over the abdomen and chest. The pulse improved after the transfusion and when the patient went back to bed it was 118. The tumour weighed 34½ lb. besides three pints of fluid over and above what escaped. The operation lasted two hours, being finished about 1.30 P.M. At 2 P.M. the temperature was 98·4° F., the pulse was 112, and the respirations were 24. Nutrient enemata with one ounce of brandy were given immediately after the operation and were repeated in one hour, but afterwards every four hours, with half an ounce of brandy. At 9 P.M. the patient was perfectly conscious; she had had no sickness. The pulse was fairly firm and there was no intermittence. Strychnia was given hypodermically once at 2.30 P.M., the reaction being good. Grain doses of calomel were given every hour, commencing at 7 P.M., until eight grains were given. During the night she slept at intervals. The urine (10 ounces) was passed naturally at 6 A.M. on the 14th and again at 10 A.M. (14 ounces). The temperature was then 99·4°, the pulse was 128, and the respirations were 32. At noon on the 14th brandy-and-milk was given by the mouth and this was continued in small but increasing doses every half hour. Chicken broth was also given. Flatus was passed first at 4 P.M. on the same day. At 8 P.M. the patient vomited for the first time and food was again stopped by the mouth for another 12 hours. The nutrient enemata had been continued and were retained. Strychnia was again injected at 1.30 P.M. On the 15th at noon the bowels acted. Food was again resumed and there was no more sickness. The tongue was moist and cleaning. The temperature was 100°, the respirations were 28, and the pulse was 132. On the 17th there had been no symptom of peritonitis. The abdomen was supple and scaphoid, as it had been all along. During the previous two days the bowels had been moved five times. On the 20th the dressings were removed. The wound had absolutely healed in its whole length per primam. The patient took plenty of milk (three pints a day), but was rather indifferent to other food. There was occasional faintness. She was now taking semi-solid food with chicken. On the 21st she had a small chop with bread and also bread-and-butter, tea, &c. The temperature was 99°, the pulse was 112, and the respirations were 25. On the 23rd the sutures were removed.

Remarks by Mr. BISHOP.—I think that Case 1 is worthy of record for three reasons—first, because it exemplifies one of the risks run by patients possessing a fibroid uterus even after the menopause and after all hæmorrhage has ceased. Secondly, because it goes to prove that any foreign body, such as the forceps, left is very promptly and effectively shut out of the peritoneal cavity proper. Substitute for the forceps a drainage-tube and it will be seen that all it could drain would be the interior of the little tube of lymph which surrounded the drainage-tube. This permitted free passage of matters from the vagina, but absolutely prevented any entrance into the peritoneal cavity, although filled with an acrid slough. Lastly, because it shows the good effect of formalin in penetrating, rendering harmless, and assisting in the removal of such slough. Case 2 is interesting, not only on account of the large size of the tumour removed, but also because, if ever a case appeared to require drainage, this did. The whole abdominal cavity was widely open for a considerable time, permitting a free view of the liver, stomach, spleen, and intestines. A large amount of escaped fluid filled it for at least 10 minutes. This came from a tear in close proximity to the rectum to which the tumour at its lowest point had been closely adherent by inflammatory adhesions. In Douglas's pouch there was a raw surface with large flakes of lymph which were left behind. Yet the after progress of the case showed not the slightest sign of peritonitis and large as the opening was it healed completely within a week. To my mind no stronger proof could be given of the truth of the principles contained in Clark's protest[2] against abdominal drainage or in the dictum that the peritoneum, if not hampered by artificial conditions, is fully competent to provide for its own safety. The advantages of immediate and complete closure in ensuring no later entrance of micro-organisms and preventing sequent hernia are too obvious to need remark.

BRITISH HOSPITAL, BUENOS AYRES.

TWO CASES OF ACUTE RHEUMATISM TREATED SURGICALLY.

(Under the care of Dr. J. O'CONOR.)

THE two following cases of surgical treatment of articular rheumatism are of interest in that they show that this method of treatment in some cases at least removes the pain very quickly and is followed by early return of mobility to the joint. The fact that salicylate of sodium seemed to be of no effect, although given in large doses, would suggest that possibly these cases were not examples of true rheumatism. Incision of joints can only be advisable in a

[2] Vide American Journal of Obstetrics and Gynæcology, April, 1897.

small proportion of the cases of acute rheumatism—namely, in those in which the usual methods of treatment have failed. Thus limited the operation may prove of benefit in cases which under ordinary treatment tend to go on to stiffness and loss of movement. Dr. O'Conor has already described some similar cases in the *Annals of Surgery* for February, 1898, and the same treatment has been advocated by Dr. J. Homans in the *Boston Medical and Surgical Journal* of Dec. 29th, 1898, for gonorrhœal arthritis.

CASE 1.—A man, aged 40 years, was admitted to the British Hospital, Buenos Ayres, on Dec. 16th, 1897, suffering from acute rheumatism. Twelve years before after recovering from a contusion of the right leg he suffered from an attack of "gout" in the left great toe which lasted for 10 days. A year later his left ankle became swollen and he was laid up for five days with what his medical man called "a touch of rheumatism." During the ensuing eleven years he frequently suffered from painful and swollen joints, at times necessitating his remaining in bed for weeks. He never had gonorrhœa or any other serious disease. On admission the temperature was 101·4° F.; the tongue was furred; there was profuse sweating; the urine was scanty, high-coloured, and albuminous; and he complained of intense pain and stiffness in the left ankle, the right knee, and the left elbow. There was considerable peri-articular inflammation about the ankle and the slightest attempt at active or passive movement caused excruciating pain. The right knee was swollen, distended, immobile, and painful to touch, and the left elbow was swollen, fixed, and tender. 20 grains of sodium salicylate were administered every two hours; the joints were enveloped in flannel and a milk diet was given. As no improvement had followed after two days of this treatment operation was decided on. On Dec. 18th the left ankle-joint was opened by a small incision parallel to the inner border of the external malleolus; nothing but synovial fluid was found. Multiple incisions were then made through the swollen and inflamed peri-articular structures; the cellular tissue was freely opened up, the capsule was extensively exposed, and the presenting tendon sheaths were incised; all the wounds were irrigated and packed with perchloride of mercury gauze. In fact, the treatment adopted was identical with that in severe cellulitis. The right knee-joint was opened by a two-inch incision and six ounces of green, turbid, flocculent (almost purulent) serum were removed. Many flakes were detached from recesses of the joint by the index finger and removed by irrigation; finally, a gauze drain was inserted. The left elbow-joint was exposed and opened by a three-inch incision to the outer side of the olecranon and a tablespoonful of turbid serum was removed; irrigation and drainage followed. The patient moved his elbow normally on the second day, the ankle on the third day, and the knee on the sixth day. The temperature fell to, and remained at, normal on the third morning. He was allowed out of bed on Christmas Day and partook of a full meal. A week later he was able to walk about and was discharged well on Jan. 10th, 1898. Before leaving he said: "I was as bad when I entered the operation-room as when I was admitted to hospital and on waking up from chloroform my pains had gone."

CASE 2.—A man, aged 43 years, was suddenly taken ill on Nov. 25th, 1897, with pain and swelling in both wrists and a few days later both knees became similarly involved. His past history was excellent; he had never had gonorrhœa or any serious disease. He remained under the care of a local medical man until Dec. 6th, and as the swelling, pain, and stiffness of the wrists continued he sought hospital treatment on this date. On admission the temperature was 102° F., with all the classic symptoms of rheumatic fever; both wrists were red, tender, swollen, and stiff; the left knee was slightly swollen, distended, and fixed. Salicylates, flannel, and a milk diet were most assiduously tried by the junior medical officer, Dr. Halahan, until Dec. 19th, when Dr. O'Conor was asked to see the patient as he was becoming very emaciated, had lost all appetite, had much fever, and as the sweats continued and the condition of the joints had become worse. On Dec. 20th both wrist joints were opened and nothing abnormal was found in their interior, the inflamed surrounding structures were most freely opened up by multiple incisions and the wounds were irrigated and packed with gauze. Arthrotomy was then performed on the left knee and two ounces of the usual dirty serum were removed; irrigation and drainage followed. The temperature became normal in 48 hours and when dressed on the third day there was not a trace of "rubor, dolor, tumor, or calor" about the wrists or the knee and the patient voluntarily moved the three joints through their normal range without the least pain. On Dec. 24th the patient was allowed to be out of bed and was given farinaceous diet. On the 27th he walked out to the garden and was given a full diet. Not a trace of the disease having reappeared he was discharged well on Jan. 11th, 1898.

Remarks by Dr. O'CONOR.—These cases evidently tend to show that surgery is a curative agent in acute rheumatism and that the sooner the latter term is dropped and acute infective arthritis substituted the sooner shall we be in a position not only better to understand the complaint but to combat it more successfully by prompt operative measures.

Medical Societies.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on June 20th, Dr. J. B. Berry being in the chair.—Dr. Eurich gave a microscopical demonstration of a series of Tuberculous Tumours which had been removed under the supposition that they were of a cancerous nature. They were from the penis, the scrotum, the labium majus, and the skin. He also showed specimens of (1) Secondary Carcinoma of a Heart; and (2) the Suprarenal Bodies from two Cases of Addison's Disease.—Dr. H. Angus gave a description of a case of Erysipelatous Anthrax. The patient was a man, aged 27 years, a wool sorter, who had been working among Persian wools. On April 28th he noticed while at work an itching pimple on his left shoulder. On the night of May 1st he felt ill; he shivered and vomited. The illness continued and on May 3rd he was seen by Dr. Angus who found that his temperature in the axilla was 100° F. and that his pulse was 120 and weak. On the anterior aspect of the left shoulder there was a semicircular patch three inches in diameter of blistered and reddened skin surrounded by subcutaneous ecchymosis. The skin over the front of the chest was reddened and œdematous, while over the right side of the chest and on both sides of the neck and face there was œdema but no redness. The heart and lungs were normal. On May 4th the temperature was 99·4° in the axilla and 100·6° in the rectum; the pulse was not perceptible at the wrist. The reddened patch increased in size. There was slight œdema of the left arm, the left scapular region, and the upper part of the abdomen. On May 5th the temperature in the mouth was 97·4°, the whole of the front of the abdomen was œdematous, the hands and feet were cold, and death took place at 11 P.M. At the necropsy it was seen that across the front of the chest and neck the skin was of a dark purple colour, swollen, and crepitant on pressure. The subcutaneous veins showed dark purple through the skin. Much clear fluid escaped when the tissues were incised. The retrosternal cellular tissue was emphysematous. The right pleura contained about half a pint of fluid. The pericardium showed subserous extravasation of blood and contained two ounces of fluid. The endocardium and endothelium of the aorta were deeply stained. There were patches of extravasation on the peritoneal covering of the intestines. The spleen was soft but not enlarged. Cultivations of the bacillus anthracis were obtained from the pericardial fluid. Photographs of the case were shown.—Dr. Rabagliati read notes on a case of Œdematous Anthrax. The patient was a man aged 47 years. The illness was only of five days' duration and the symptoms consisted in swelling of the upper and lower lips and subsequently of the penis and scrotum. There was no rise of temperature or of the pulse-rate. On one day only there was slight shivering. The patient recovered.—Dr. J. H. Bell read notes on a series of cases of Anthrax of the œdematous and erysipelatous varieties. He stated that though described as occurring on the continent such cases had not been previously described in this country.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—An ordinary meeting of this society was held at 20, Hanover-square, W., on June 28th, Dr. H. Radcliffe Crocker, President, being in the chair.—The following cases were shown:—Dr. T. D. Savill: Lupus Erythematosus in a Female.—Dr. Rufenacht Walters: Two cases of Leucodermia.—Dr. Warde (for Dr. P. S. Abraham): (1) A girl with patches of Morphœa; and (2)

a case of Lupus of the Lobule of the Ear in a woman.—Dr. David Walsh: A case of Pityriasis Rubra in a man (? commencing mycosis fungoides or some form of exfoliative dermatitis).—Dr. Alfred Eddowes: (1) A case showing Melanodermia, Leucodermia, General Alopecia, Morphœa, and Sclerodermia with resulting Atrophy; (2) Pruriginous Eczema of the Face and the Hands in a boy; and (3) a case of Lupus Vulgaris in a Girl which had been treated by scraping and cautery six months ago.—The President brought some interesting drawings and exhibited under the microscope Mycelium and Spores from a case of Eczema Marginatum.—In all three of the cases of Leucodermia which were shown it was noted that the thyroid gland could not be felt.—The President, Dr. Walters, Mr. Pernet, Dr. Bowles, and Dr. Savill joined in the discussion.

Reviews and Notices of Books.

Vital Statistics. By ARTHUR NEWSHOLME, M.D., F.R.C.P. Lond. London: Swan Sonnenschein and Co. 1899. Price 7*s.* 6*d.* net.

IN the year 1889 Dr. Newsholme, the medical officer of health of Brighton, published the first edition of his treatise on Vital Statistics, a work which ever since that date has been recognised both here and in America as the leading text-book on the subject. During the 10 years which have elapsed since the issue of the first edition the author has been continuously engaged in the prosecution of his favourite study, which consists in the application of statistical methods to the solution of the many problems which demand the attention of the health officer; and aided by the riper experience thus gained he has recently issued a second edition which is to all intents and purposes a new book. After a careful perusal we have no hesitation in speaking of Dr. Newsholme's work as a masterly production which will undoubtedly enhance the reputation of its accomplished author. The book is an eminently practical one throughout. It will not serve the purpose of the sensational writer in quest of startling novelties for the gratification of the curious, but it will be found to be a thoroughly trustworthy guide for the earnest student and above all things an indispensable work of reference for the medical officer of health.

We much regret that considerations of space prevent our noticing as fully as we should like even a tithe of the important topics which are discussed, often with conspicuous ability, in this book. The utmost that we can attempt is a brief comment, by way of example, on a few of its more prominent teachings, referring our readers to the original for complete information on the many interesting matters dealt with in its pages. Population is the basis upon which all modern systems of vital statistics depend, for it is in terms of population that ratios of birth, death, and sickness, &c., have to be expressed in order that valid comparisons may be made between different localities with respect to their healthiness or the reverse. The book therefore naturally opens with a detailed examination of the methods adopted in this and certain other countries for ascertaining the numbers of the people at fixed intervals, as well as for estimating the changes of population which are expected to take place locally in the years intervening between one census and its successor. In discussing and sometimes criticising the methods followed at Somerset House Dr. Newsholme has much to say which will prove interesting and instructive to the general reader and which is certainly worthy of careful consideration by those who are responsible for our national system of vital statistics.

The successive stages of improvement in our modes of numbering the people are traced from the establishment of the first English census in 1801 down to 1891, the date of the last enumeration. The first five decennial censuses provided for scarcely more than a mere counting of heads, little serious account being taken of the ages or the social condition of the people beyond a rough sorting into two groups according as they were engaged in agriculture or in trading. In 1851, however, information was for the first time demanded respecting not only the exact age and the sex but also the definite employment of the people; particulars were likewise obtained concerning their place of birth and their civil condition. Adults were further classed according to relationship, and details were given in the report respecting the numbers incapacitated for labour by reason of physical disability, such as blindness, dumbness, or insanity.

In speaking of the census of 1851 as the first in this country which could be described as fairly satisfactory Dr. Newsholme accords well-deserved praise to its organiser, Dr. Farr, under whose able direction the English census reached a stage of development which is as nearly complete in regard to essentials as we are likely to obtain for some time to come, having regard to the existing temper of the people and their well-known objection to furnish returns of an inquisitorial nature respecting personal or family affairs.

In the enumeration of about 30,000,000 people, especially under the conditions obtaining in this country, it will be readily understood that slight errors are practically inevitable. The experience of recent censuses shows that there is a great tendency, not alone amongst the illiterate, for individuals to return their ages incorrectly and to state them as some multiples of 10—e.g., as 30, 40, 50, &c., years, whereas in reality the ages should appear as two or three years either above or below the numbers specified. For this reason Dr. Farr determined to divide the term of life into decennial periods beginning with the fifth instead of with the tenth year, so as to correct as far as may be the error referred to. Accordingly the grouping of ages in our national records was, and still remains, as follows: 5–15, 15–25, 25–35 years, instead of 10–20, 20–30, 30–40, &c. The ages of young children appear to be especially liable to erroneous statement, ignorant parents often returning their children as "one year old," or as "two years old," when in reality they are only in the first or the second year, as the case may be. The tendency to misstatement of age amongst women about the period of puberty and also amongst old persons of both sexes is referred to in the text, and the effect of the first of these errors on the age-constitution of the population is explained.

Dr. Newsholme criticises the official mode of estimating the population of certain large towns and proves by the citation of striking instances that estimates thus formed are unworthy of trust beyond a very few years after the actual enumeration. In a recent article[1] on the population estimates of Liverpool we gave particulars of the method adopted at Somerset House in framing these estimates and showed the limits within which they may be depended upon for the calculation of death-rates, &c. Accordingly there is no necessity to recur to the subject now, but we are glad to find that the author agrees with us in strongly advocating recourse to a quinquennial census in England and Wales as the only means of obviating the well-known tendency to error here referred to.

Intimately related to the age-distribution of a population is the question of its birth-rate. Other social conditions being equal it may be said that the latter is determined by the former. It would appear at first sight as though the birth-rate of a community were a matter of subordinate importance, at any rate in comparison with the proportion of sickness and of death, which taken together are generally

[1] THE LANCET, June 10th, 1899, p. 1569.

accepted as the true test of sanitary condition. The author, however, shows that the local rates of birth when accurately ascertained are of great importance to the vital statistician, and that no inquiry can be considered completely satisfactory which leaves out of account the proportion which the births bear to the population.

Dr. Newsholme is of opinion that the ordinary method of stating the birth-rate—namely, as so many in a thousand of the total population—is in some respects faulty; but when employed to indicate changes in the birth-rate of the same town in a series of years, or to exhibit differences in the rates of separate towns the populations of which are of similar age constitution, the ordinary method gives fairly trustworthy results. A better plan is to calculate the births in terms of the number of women at child-bearing ages, instead of in terms of the male and female population at all ages. For two towns in which the industrial conditions are practically identical, as they may be taken to be in Leeds and Bradford for instance, this method would suffice for practical purposes, but in the case of such dissimilar populations as those of Whitechapel and South Kensington, for example, the results would be very misleading. The only accurate method is to separate the legitimate from the illegitimate births, stating the former as so many in each 1000 married women at child-bearing ages and the latter as so many in each 1000 unmarried women at the same ages. By comparing the respective birth-rates among unmarried women in these metropolitan districts Dr. Newsholme shows that when computed in terms of the general population the illegitimate birth-rate of Kensington is almost as high as that of Whitechapel, whereas when the births are reckoned in proportion to unmarried women at child-bearing ages the illegitimate birth-rate of Whitechapel is nearly two and a-half times as high as it is in Kensington, an excess of 136 per cent. Social position has a great effect on the birth-rate. Making due allowance for certain unavoidable fallacies in arriving even approximately at the birth-rate of different classes of the population, Dr. Newsholme quotes Dr. Bertillon's figures as indicating that whilst the birth-rate of women aged between 15 and 50 years did not exceed 63 per 1000 in the best quarters of London and 87 per 1000 in quarters somewhat less fashionable, it amounted to 140 per 1000 in poor quarters and to 147 in the poorest quarters of the metropolis.

In point of importance statistics of mortality naturally surpass all other statistics, whether considered from a sanitary or from a social standpoint; accordingly special prominence is given to the subject in the work before us. We are unable to follow Dr. Newsholme in his exhaustive dissertation on mortality; nor is this needful, inasmuch as it is avowedly based on the successive reports of the Registrar-General, all of which have been fully reviewed in these columns as soon as possible after publication. We would, however, draw special attention to his remarks on the significance of low death-rates, and to his warning against accepting such without question as proof of the healthiness of a community. Much harm, he says, has been done of late years by those who have led the public to believe too much in low death-rates when the mere fact of a district having such rates ought to make one suspect that some source of fallacy must be present. Such sources are to be found readily enough, and they are most frequent in those places which owe some of their prosperity to the common belief. It is always well to distrust a very low death-rate, and careful inquiry should be made into the sex and age distribution of the population before coming to a conclusion.

Dr. Newsholme devotes considerable space to the subject of life tables and demonstrates their value as the only reliable means of ascertaining the actual mortality of a community; this they effect by eliminating from the population the disturbing influence of differing age and sex constitution. He contributes a valuable chapter on the construction of tables of this kind, indicating the successive steps by which a medical officer of health who possesses a fair elementary knowledge of mathematics may compute a life table for himself. Not the least valuable section of the book is that which exposes the more prevalent forms of fallacy in the use of statistical data. Throughout the book Dr. Newsholme has been careful to guard his readers against drawing invalid conclusions from insufficient or isolated facts, but in the twenty-seventh chapter he presents a summary of the more common pitfalls which beset the progress of the tyro, and we would very earnestly commend this chapter to the attention of those who desire to attain an acquaintance with the science of vital statistics which shall be something better than superficial.

Materia Medica and Therapeutics: an Introduction to the Rational Treatment of Disease. By J. MITCHELL BRUCE, M.D., F.R.C.P. Lond., Physician and Lecturer on Medicine, Charing-cross Hospital; Consulting Physician to the Hospital for Consumption, Brompton. Thirty-eighth Thousand. London: Cassell and Co. 1899. Pp. 609. Price 7*s.* 6*d.*

THIS work is too well known to need a long notice. The number of previous editions is the strongest evidence that the author has succeeded in writing a text-book which supplies all the needs of practitioners and students. In the preparation of the present edition advantage has been taken of the adaptation of the work to the new British Pharmacopœia to subject it to thorough revision and to bring the account of the actions of the drugs composing the materia medica up to the level of our latest knowledge.

Part I. deals with the Inorganic and Part II. with the Organic Materia Medica, whilst Part III. concerns General Therapeutics. In Parts I. and II. greater detail respecting the chemical and pharmaceutical relations of the individual drugs has been introduced than was the case in previous editions. The reader is at once struck with the thoroughness with which the whole work is written. In the description of the various medicaments, for instance, the source of the drug is first indicated, then its chemical properties are given, and next the preparations. Its actions and uses are then discussed under the following heads: 1. Immediate Local Actions and Uses. 2. Actions in the Blood. 3. Specific Actions. 4. Specific Uses. 5. Remote Local Actions and Uses.

When describing the general therapeutics of the different systems of the body the following plan is adopted: (1) a brief sketch of the physiological relations of the system is given; (2) the pharmacodynamics of the same are considered, chiefly dealing with the drugs examined in the previous parts of the work but frequently referring to non-medicinal measures—such as food, air, exercise, and baths; (3) a sketch is given of some of the pathological relations of the system; (4) a brief reference is made to the evidence of natural recovery in the particular system and to the failure of such attempts; and (5) the rational therapeutics of the system founded on the previous four conditions complete the account. Another valuable feature of the book consists in the introduction of numerous tables containing summaries of drugs and their actions—e.g., "synopsis of drugs which act upon the stomach, excluding emetics." In conclusion, we can cordially recommend the work to students preparing for examinations and to practitioners as a handy work of reference.

Outlines of Zoology. By J. ARTHUR THOMSON, M.A., Regius Professor of Natural History in the University of Aberdeen. Third edition. London: Young J. Pentland. 1899. Pp. 819. Price 15*s.*

THE second edition of this work was published in 1895, and those who have worked with it will not be surprised that

a third is now called for. The book has been well brought up to date and contains chapters on Comparative Physiology, Comparative Pathology, and the Theory of Evolution, as well as over 50 additional illustrations. The first page shows the different groups of animals arranged in a tabular form, and throughout the work the system of tabulating information is adopted wherever possible. We do not doubt that to this habit of the author much of the success of the book with students is due, for the student appreciates a definite statement above everything, and has no sympathy with writers who after fairly displaying both sides of a question leave it with the remark that there is much to be said for each. For a student's text-book tabulation has certain disadvantages as well as many advantages; it sometimes binds the author down to rather more sweeping assertions than he would otherwise feel justified in making, and it tends to give the reader an idea that zoology is a more cut and dried subject than it is. The average student is taught biology in order to train him to observe and to reason from his observations, and there is always the danger of his picking out the tables and committing them to memory—a practice which, unfortunately, gives excellent results at many examinations, but which is absolutely opposed to the objects with which natural science is included in a student's curriculum. On the whole, however, we think that the obvious advantages of tables are greater than their disadvantages, and the fact that they may be abused is no good reason why they should not be used.

Speaking of the book as a whole, we regard it as an extremely good one from the student's point of view; it is written in an easy, pleasant manner, the facts are well arranged and with a due regard for perspective—that is to say, stress is laid on those which in the present state of our knowledge seem of first-rate interest, while those on which no important generalisations now seem to hang are placed in the background or are the ones omitted. This is speaking generally. It is, of course, possible for any zoologist to find special points which he would have treated differently, but we think we may conscientiously assert that the present work furnishes by itself a sufficient and reliable guide to the theoretical study of zoology and, if accompanied by practical work, may be safely recommended to a beginner as his text-book.

Handbuch der Gynäkologie. In Three Volumes. Edited by Professor J. VEIT. Third Volume, Second half, First Part. With 88 Illustrations in the text and 15 Plates. Wiesbaden: T. F. Bergmann. 1899. 8vo. Pp. 600.

THIS volume of Professor Veit's Handbook of Gynæcology is devoted to an account of the Diseases of the Cellular Tissue of the Pelvis and Carcinoma of the Uterus. The Diseases of the Cellular Tissue of the Pelvis are described by Professor von Rosthorn. This section includes an account of the Anatomy illustrated by numerous very beautiful plates, Injuries and Hæmatoma, Inflammations and New Growths. Hydatid Cysts and Actinomycosis are also shortly considered. The whole forms a very excellent description of all the most important facts known and is a model of clearness and thoroughness. The consideration of the important subject of Carcinoma of the Uterus begins with an account of its anatomy by Professor Winter. This description illustrated by numerous drawings is, as might be expected from the name of its author, a recognised authority upon the subject, an accurate and scientific one. We are glad to see that Professor Winter takes exception to the use of the misleading term "adenoma malignum" and prefers the more correct expression "carcinoma adenomatosum."

The account of the Etiology, Symptoms, Diagnosis, and Radical Treatment of Carcinoma of the Uterus has been entrusted to Professor Frommel. A full description is given of the various forms of operation practised and their individual defects and advantages are pointed out. The author upon the whole prefers the use of ligatures in uncomplicated cases of vaginal hysterectomy, although he admits that in certain cases the use of pressure forceps enables the operation to be concluded more speedily and gives equally good results.

The various means which can be employed in cases of carcinoma too advanced for radical treatment are fully discussed by Dr. Gessner. The section upon Carcinoma Complicating Pregnancy is from the pen of Dr. Sarwey. The conclusions he arrives at as to the treatment of these cases are as follow. In cases of carcinoma complicating pregnancy the best treatment in the first four months is vaginal hysterectomy, combined in from the fifth to the seventh month with preliminary emptying of the uterus, and preceded in the last two months by abdominal or vaginal Cæsarean section. In cases of inoperable carcinoma and pregnancy in the interests of the child expectant treatment should as far as possible be carried out until the end of pregnancy. If delivery occurs spontaneously or prematurely and if the carcinoma can be removed total extirpation of the recently delivered uterus should be performed as soon as possible. If the growth cannot be removed and delivery *per vias naturales* is impossible an attempt should be made to save the child by the performance of Cæsarean section.

The editor, Professor Veit, contributes the concluding article of this volume upon Deciduoma Malignum. After a complete survey of the literature and of the recorded cases he formulates the following important conclusions. If a woman with a fibro-sarcoma or an endothelioma becomes pregnant, as a result of the pregnancy the original tumour undergoes certain alterations and its cells acquire and retain syncytial characters. The presence of the tumour may in its turn lead to the death of the ovum and the cessation of the pregnancy, or a vesicular mole may develop or the pregnancy continue uninterruptedly. If delivery or abortion occurs the whole ovum may be expelled, while the original tumour, retaining its syncytial character, may either by continuing to grow or by degenerative changes lead to the death of the patient. The most important factor is the onset of pregnancy in a uterus containing a sarcoma or an endothelioma and as a result of this the occurrence of characteristic changes in the structure of the tumour. Professor Veit, in fact, regards the disease known as deciduoma malignum as a sarcoma or endothelioma altered by the occurrence of pregnancy, and in this he confirms the views of the majority of English observers.

The plates illustrating the section upon the Cellular Tissue are exceedingly good, while the remainder of the illustrations are well chosen and well reproduced.

The volume is fully up to the standard of its predecessors and forms by no means the least important part of a work upon gynæcology which when complete will have few or no rivals.

LIBRARY TABLE.

Sopra un Nuovo Metodo di Esplorazione dei Tubercoli Quadrigemelli nei Cani. (*A New Method of Investigating the Tubercula Quadrigemina in Dogs.*) By Professor GAETANO JAPPELLI. Naples: Cav. A. Tocco. 1899. Pp. 13.—In this pamphlet Professor Jappelli of the University of Naples describes a way of producing lesions of the tubercula quadrigemina with, as he claims, much less injury to the skull and brain than is possible by other methods. An aperture of only six or seven millimetres in diameter having been made in the occipital bone, the next step is to incise the dura mater carefully and to introduce a small aseptic galvano-cautery having the form of a catheter with the platinum wire projecting at the tip. The

cautery is guided by being kept in contact with the posterior aspect of the tentorium so as to avoid injuring the cerebellum. When the desired point is reached the current is passed for a moment or two and the instrument is withdrawn. The animals generally recover completely in a short time and survive for months.

The Middlesex Hospital: Reports of the Medical, Surgical, and Pathological Registrars for the year 1897. London: H. K. Lewis. 1898. Pp. 392.—The reports annually issued by the medical, surgical, and pathological registrars form a most valuable series of statistical records. The amount of labour which is entailed in their production is great and can probably only be fully understood by those who have had to compile such reports. They have the merit of being uniform, the reports each year being arranged on the same plan as their predecessors. In addition to the annual statistics short reports are given of certain "exceptional cases" which have occurred during the year. Thus the medical registrar records the following amongst others: Hydatid of Pleura, Cerebellar Tumour, and Addison's Disease. The surgical registrar, in addition to an elaborate table of the many forms of hernia treated during the year, gives details of 49 cases in which operations on the kidney were performed. The pathologist's report is as complete as such a compilation can be and speaks volumes for the manner in which the records are kept. The Middlesex Hospital is to be highly commended on the completeness and regularity with which its registrars issue their reports, thus rendering their archives a valuable source of reference.

Clinical Diagnosis: the Bacteriological, Chemical, and Microscopical Evidence of Disease. By Dr. RUDOLPH VON JAKSCH. Specially revised and enlarged by the Author from the third English edition of the translation by the late JAMES CAGNEY, M.A., M.D. R.U.I. Fourth Edition. 150 Illustrations. London: Charles Griffin and Co. 1899. Pp. 535. Price 24*s.*—We have on several occasions reviewed in detail previous editions of this work, both in its German form and in the excellent translation which the late Dr. Cagney prepared. The present edition has been revised by the author and considerable additions have been made, the book being brought thoroughly up to date. As we remarked on a former occasion it is an indispensable book to all who are pursuing clinical investigation. It is extremely full and gives all the methods which are of value with such clearness that anyone can follow them, and the references to authorities are numerous and collected in a copious bibliography at the end of the book with reference numbers through the text The illustrations are abundant and clear and there is a very full index. The book will certainly keep its place as the best of its kind for a long time to come.

Anatomy of the Brain and Spinal Cord. By J. RYLAND WHITAKER, B.A., M.D. Lond., Lecturer on Anatomy, Surgeons' Hall, Edinburgh, &c. Sixth thousand. Numerous Illustrations. Edinburgh: E. and S. Livingstone. 1899. Pp. 200.—This little work on the anatomy of the central nervous system will be found to be most useful for those who are preparing for the higher examinations. Dr. Whitaker is a practised and successful teacher and he has written this book entirely from the standpoint of the student of anatomy. It is extremely well arranged and clearly written and is profusely illustrated by diagrams of a very helpful character, those depicting the course of the fibres of the cranial nerves being particularly good. Those who are studying anatomy will find it a most valuable guide in mastering what is perhaps the most difficult part of the subject.

Old St. Thomas's. By A. E. RUSSELL, M.D. Lond. London: T. Vickers-Wood.—This is a reprint from the *St. Thomas's Hospital Gazette* of a paper read before the Medical and Physical Society of St. Thomas's Hospital by Dr. A. E. Russell and traces the story of the hospital from its origin which dates from early Norman times. The reprint, which is well illustrated with reproductions of old prints and with pictures of modern portions of the hospital, forms pleasant reading and should possess an interest not only for St. Thomas's men but for all who take an interest in the history of hospitals.

Knowledge: an Illustrated Magazine of Science, Literature, and Art. London: J. Thompson.—This magazine is always full of good things, but the present issue (July) contains several articles of interest to medical men. Dr. J. G. McPherson writes on Some Experimental Methods of Measuring the Duration of a Discharge of the Roentgen Rays and Mr. Howard B. Little continues his articles on Electricity as an Exact Science. Microbes in Coöperation is the title of an article by Mr. G. Clarke Nuttall, B.Sc., and the fascinating account of the Mycetozoa and Some Questions which they Suggest is continued by the Right Hon. Sir Edward Fry and Miss Agnes Fry. Under the heading of Microscopy Mr. J. H. Cooke gives some useful hints to microscopists.

JOURNALS AND REVIEWS.

THE current issue of *The Leisure Hour* contains an interesting account of the Apothecaries' Hall and of the Chelsea Physic Garden which, as our readers are aware, has been transferred from the Apothecaries' Society to the trustees of the London parochial charities. The article, which is illustrated, points out that the vocation of an apothecary is an ancient one, though it has not always meant the same thing. Originally the *apotheke* was the place where stores were kept, especially wines, and the *apothecarius* was the man in charge of it. Being dry and airy it was well adapted for the storage of drugs and in the process of time the drugs drove out the wines to be looked after by the *cellarius*, and the *apothecarius* who found enough to do as keeper of the drugs eventually came to compound and administer them. As proof that the apothecaries have long been officially recognised as something more than mere makers and purveyors of drugs the author says: "Their most notable rise in the social scale took place during the plague. 'During this scourge,' says Mr. Corfe, 'a great majority of the regular physicians died and many of the survivors fled into the country; thus the friends of the sick were forced to implore the aid of the apothecaries who then left their counters and came for the first time to the bedside of the sick.'" The space at the disposal of Mr. W. J. Gordon, the author of the article, has hardly allowed him to do full justice to his subject, which, however, is treated in a terse and succinct manner.

BRISTOL ROYAL INFIRMARY.—A very successful carnival was recently held at the Bristol Zoological Gardens in aid of the funds of the nursing home of the Bristol Royal Infirmary. It is hoped that the institution will benefit to the extent of about £1000.

GENERAL PRACTITIONERS AND PUBLIC VACCINATORS.—At the meeting of the Honiton Board of Guardians held on June 24th a letter was read from a general practitioner complaining that one of the public vaccinators had called upon one of his patients and endeavoured to vaccinate her child although he was attending the child and had postponed its vaccination until after July 6th. On the suggestion of the chairman the clerk was instructed to write to the public vaccinator and to point out that in two small particulars he had exceeded his duties—viz., by calling in the evening after the time specified by the new Vaccination Act and also in visiting whilst the private practitioner's certificate of postponement was in force—and that the board hoped the public vaccinator would in the future adhere strictly to the terms of the Act.

THE LANCET.

LONDON: SATURDAY, JULY 8, 1899.

MR. WYNDHAM introduced in the House of Commons on June 21st another instalment in continuation and amplification of the programme which was put forward by the Government and passed by the House some sessions ago. The Military Works Loan Bill, by which the Government sought to obtain a loan of £4,000,000, was explained to the House, together with the projected scheme for spending it, in a remarkably clear and practical way by the Under-Secretary for War. We may pass over that portion of his speech dealing with the expenditure to be appropriated in connexion with our system of Imperial defence and come to the second object of the loan—namely, the barrack portion of the scheme—with which for hygienic as well as patriotic considerations we are more directly interested.

The ideal to be observed, said Mr. WYNDHAM, in providing barrack accommodation was that it should be good and in the right place. With a courageous and outspoken frankness which was needed and commendable under the circumstances he declared that many of the barracks were built 70 or 100 years ago and were obsolete in relation to the standard of decency and comfort which now prevailed. Many of them were insanitary and on the verge of ruin and in the wrong places—built in the heart of towns and not with the view of the bringing together of the units of larger bodies within reasonable access of ground on which they might train. A very great deal had been done to abolish positive death-traps and also to raise the standard of comfort and decency in our barracks; and a little had also been done towards effecting concentration. Having to provide accommodation, however, for an increase of 25,000 men an excellent opportunity presented itself for taking a forward step towards the realisation of these objects. A careful examination of all the barracks in the three kingdoms had been made by the military advisers of the War Office with the result that they had condemned absolutely the few remaining barracks which were unfit for habitation and that they had made a list of other barracks which were so ancient and ill-placed as to render any considerable expenditure on them uneconomical. Still, they could not achieve a change of this kind by a wave of the wand and the barracks so scheduled would only have so much money spent upon them as to fit them to give a temporary shelter to our troops until better accommodation more scientifically placed could be provided. Furthermore, they had made a list of old barracks to be added to and of new barracks to be built which would give the army new and more decent accommodation, distributed with due regard to the exigencies of organisation. In fact, a complete scheme had been drawn up, to give effect to which would require a sum of £5,254,000. But as it would take from four to five years to expend that sum properly and economically the Government were not now asking for more than £2,770,000 in respect of barracks. Salisbury Plain would be made into a second Aldershot and it was proposed to erect barracks there for seven battalions and six batteries of artillery. In addition, works are to be undertaken in order to enlarge or improve the barrack and hospital accommodation at several of the military camps and stations at home and of those at Malta and Gibraltar abroad.

An experimental trial has, we understand, already been successfully made of dining-halls for soldiers and the introduction of this provision will become a new feature in the barracks about to be erected. The hygienic advantages of dining-rooms are obvious. Hitherto the men's barrack-rooms have been both day-rooms and dormitories in which they had to live and take their meals by day and sleep by night, whereas now the rooms can be vacated and thoroughly ventilated during the daytime. As regards cubicles in barrack-rooms, however, we think the Government is quite right in hesitating about their provision, notwithstanding what the advocates of the measure have alleged in their favour, for they would be more or less obstructive of barrack-room ventilation, and if the partitions were of wood there would be an increased risk of danger from fire; moreover, if cubicles would add to the soldier's self-respect and privacy they would nevertheless be open to some possible objections in this respect on the ground of administration and discipline. It cannot be denied, we think, that vast improvements have taken place in late years in all which concerns the construction, ventilation, and general hygiene of barracks and the health, convenience, and general comfort of the soldier—more especially, perhaps, in the case of quarters for married soldiers. The types of buildings which are now provided for warrant officers, staff sergeants, and married soldiers are excellent in their way and show the great progress which has been made in late years. Warm water has, we are informed, now been allowed for soldiers' baths during the cold season of the year—a great boon as well as a very desirable health measure. Nor must it be forgotten that a commencement has been made in providing means for change of air for soldiers recovering from attacks of serious or acute disease and convalescents; and we sincerely trust that this movement is destined to undergo still further development. A list of the stations to which it is proposed to send convalescent soldiers has been drawn up for the information of those interested in this question.

The present Government, it is but fair to say, has proved itself a true friend to the soldier in all that appertains to the promotion of his health, comfort, and self-respect. In addition to the provisions which have been made we think that the institution of drying rooms for drying a soldier's wet clothing when returning from parades, manœuvres, and route-marching at all our large camps and barracks would prove a very useful and desirable measure. We are of opinion, too, that the War Office might have shown more enterprise in the introduction of some practical system for the application of biological principles in the treatment of sewage at some of our larger military stations. Various methods of doing this have now been in use

for some time and there seems to be no doubt as to the soundness of the principle on which sewage biolysis is founded. Mr. CAMERON'S plan at Exeter is simple and efficacious and there are several others probably equally good. It is not easy to say at present, however, which method—for they are really all varieties and modifications of one another—is the best and financially the cheapest. Possibly that is the reason why the War Office have not yet decided upon the adoption of any particular method but are content to await further results. At military stations on the seaboard it seems probable, too, that the Hermite process of treating sewers and sewage might be usefully tried.

MR. HAFFKINE'S address before the Royal Society places preventive inoculation on a higher plane than it has hitherto occupied. Practically a review of the results of nearly 10 years' investigation in the laboratory on animals and in the wider field of special and general communities of man it is peculiarly interesting as setting forth in a clear and concise manner the facts and working hypotheses which have led to the present position which preventive inoculation holds in the medical world. Though the system of preventive inoculation is essentially that of JENNER and PASTEUR we doubt if either of these two masters have worked with greater precision and boldness of thought in that domain than has Mr. HAFFKINE, their disciple. What each did respectively for small-pox and anthrax HAFFKINE is doing for cholera and plague and indirectly for typhoid fever and he has given an impetus to prophylactic research which must in the long run be brimful of results.

Since his discovery that animals could be protected from the effects of the comma bacillus by a carefully-prepared virus and his deduction therefrom that what applied to animals might in this instance be applied to man Mr. HAFFKINE has been engaged in putting this deduction to a practical test whenever opportunity occurred and for this purpose his work was transferred from the laboratory to special communities in India over which by reason of particular conditions there could be close supervision. Such communities were to be found in the cantonments, jails, and tea-gardens of India in localities liable to be affected with cholera and where the incidence of cholera on those who were inoculated and those who were not could be watched almost as carefully as any experimental work in the laboratory. From these sources favourable results were recorded over and over again, but the most extended and continuous observations were obtained in the cholera-stricken bustees of Calcutta where some 8000 people were inoculated and the results collected as to the occurrences of cholera in the huts inhabitated by the inoculated. The Calcutta results showed that for a period of nearly 14 months the number of deaths among the inoculated was 22·62 times smaller than among the uninoculated and for the rest of the time under observation the proportion in their favour fell to 1 and 1·54. One important and unforeseen result, however, was to be observed in all these inoculations. It was that while the number of deaths appeared to be strikingly influenced by the inoculations the proportion of deaths to those attacked was not changed. The case incidence was remarkably affected, but the case mortality was not reduced. In other words, the inoculation prevented in a very high degree people from being attacked with cholera, but it did not prevent those persons who were attacked from dying in as high a proportion as the uninoculated. This was a new and unexpected aspect in the problem of preventive inoculation, and it was one which was at once carefully studied in the laboratory with the view of adopting a method for cholera inoculation which would affect the case mortality as well. Plague, however, broke out in India at this time, and it was decided to apply the new method to the plague inoculations with the view of securing not only a lowering of the susceptibility to the disease which had been obtained in cholera but also a reduction of the case mortality. For the cholera "vaccines" the microbe had alone been used which gave to the serum of the blood a strong destructive power against comma bacilli but no antitoxic powers capable of neutralising the effect of the products of these microbes. It was now decided in plague to use not only the bodies of the microbes but also their concentrated products with the object of combining antibacterial and antitoxic properties. In order to accumulate for the plague prophylactic a large amount of extracellular toxins the bacilli were grown in broth in the ingenious manner described by Mr. HAFFKINE in his address. The process is continued for five or six weeks. The microbes are then killed by heating to a temperature ranging from 65° to 70° C., after which the virus is ready for use. Subsequently to the necessary experiments on animals and prior to its general application to communities this virus was first proved to be harmless to man by inoculation of the officers of the laboratory, the principal and professors of the Grant Medical College, a large number of leading Europeans and native gentlemen of Bombay, and others. Mr. HAFFKINE quotes in his address the statistical results of some of the principal applications of the prophylactic. For instance, at the Byculla Jail there were 12 cases of plague and six deaths among 172 uninoculated prisoners, and only two cases with no deaths among 147 inoculated prisoners. At Umerkadi Jail there were 10 cases and six deaths among 127 uninoculated and only three cases with no deaths among 147 inoculated. Again, at the village of Undhera there were 27 cases and 26 deaths among 64 uninoculated inhabitants, and eight cases with three deaths among 71 inoculated inhabitants. Other observations on a larger scale were quoted, such as those at Lanowlie, Kirkee, Damaon, Hubli, Dharwar, and Gadag, and in each the difference in the mortality from plague between the inoculated and the uninoculated was estimated to average over 80 per cent. Further, it appears from the data collected in the larger hospitals that the case mortality among the inoculated admitted for plague is at least 50 per cent. lower than among the uninoculated.

These results may justly be termed most brilliant. Their accuracy is vouched for by numerous independent observers. Even opponents have been compelled by the logic of facts to admit that Mr. HAFFKINE'S system has triumphed. Some of the problems still remaining to be solved were mentioned by Mr. HAFFKINE and the discussion at the Royal Society touched on certain defects connected with

the preparation of the virus and on certain points which it is desirable to know concerning the constituents of the "vaccine," but the discussion also disclosed the fact that Mr. HAFFKINE has met with stupendous difficulties in the prosecution of his self-imposed task and that these matters, though of secondary importance, are receiving and will still further receive careful attention. We trust that the Indian Government will grant to Mr. HAFFKINE on his return to India in the winter, when we hope his health will be fully recruited, the necessary trained assistance in his laboratory to enable him to study the important problems still remaining, for we cordially endorse Lord LISTER'S statement that Mr. HAFFKINE is the man qualified above all others to undertake this task and to accomplish it successfully.

CONSIDERABLE interest has recently been taken by the public in paragraphs and articles which have appeared in the newspaper press of Edinburgh regarding certain doings of the resident medical and surgical officers of the Royal Infirmary there. We have made inquiries into the matter and the facts appear to be broadly as follows. The resident officers are changed every six or 12 months and the posts are looked upon as the highest prizes to which young graduates can aspire. They are given to young men of conspicuous ability or who have strong private influence with members of the honorary staff, on whose nomination they are appointed by the infirmary managers. The resident officers have thus a certain claim to regard themselves as a somewhat select body and there has perhaps been of late a growing tendency on their part to exalt their position and themselves. This tendency has not been without a humorous and useful side and has some of its roots in the traditions of the past which have been handed down from generation to generation.

Where so many young men live together there are gifts and accomplishments of a very varied order. Some men have social proclivities, some have retained not a little of their schoolboy larkiness, some are studious, and some may have characteristics which do not endear them to their fellow-residents. The work of the ward is arduous and the men are kept as a rule steadily at hard work during their tenure of office. Any relaxation which they have indoors is in the Residency where they have a common dining-room and a private room. It was in the Residency that the events which have recently attracted public attention occurred. The facts seem to be that there were two parties in the Residency, the one a majority and the other a minority. The majority made certain rules and regulations which it was determined should be applicable to all the residents, and, failing compliance, fines or other form of punishment were to be inflicted. These regulations were not always characterised by wisdom or prudence and some of them might be regarded as merely the ebullition of the animal spirits of very young men who found themselves for the first time in positions of power and responsibility. It can easily be understood that such circumstances might readily give rise to very strained relations, especially if the majority attempted to enforce its decisions by various kinds of horseplay or made the minority the object of recurring practical jokes or annoyances of one kind or another. This, so far as can be understood, seems to have been the state of affairs which was brought to a climax on the night of the annual dinner of the Residents' Club. This club consists of present and past residents, and, as in similar institutions, an annual dinner brings its members together. After the dinner this year some young practitioners, recently residents, went to the Residency and took part in, if they were not the main instigators of, some further horseplay or practical jokes which took the traditional form of turning men's rooms topsy-turvy. It is said that this so exasperated the victims that the matter was reported to the administrative head and thence to the Board of Managers. At this stage the matter got into the daily press and the "rowdyism," as it was called, was written about and spoken of. There seems to be no doubt that things had been carried too far. The circumstances were of such a kind that it was easy to represent them as of a highly objectionable or even disgraceful character. When complaint was made the managers had to inquire strictly into the circumstances. The result has been that the residents have been reprimanded, and the outsiders have had their hospital tickets suspended for six months, although they voluntarily appeared before the managers and tendered an apology.

The whole matter was not worthy of being raised above the level of a domestic brawl and ought never to have reached the newspaper press. Still, the possibility of publicity and of conduct being represented as scandalous has often no unimportant part in determining conduct in many departments of life, and there is no doubt that the experience of the past few weeks will sober some of the young blood, will be a lesson to all, and will make a valuable addition to the Residency traditions. British gentlemen must always remember that bullying, persecution, or tyranny of any kind is not for them and that if any such habit has been learnt in public school life it must be abandoned when the responsibilities of professional life are assumed.

WE have devoted special leading articles to the discussion of the proceedings of the General Medical Council with reference to medical aid associations, to its penal action, and to the HUNTER case. However important these subjects may be to those who take a special interest in them they do not exceed in interest those larger questions which affect the profession as a whole, such as the raising of the standard of preliminary education; the amendment of the Medical Acts; the increase of Direct Representation; the admission of foreigners or colonials with foreign or colonial degrees to our Register; the necessity for a clear law to suspend the use of all letters indicative of qualifications registrable under the Medical Acts while the possessor of such qualifications is erased from the Register for misdemeanour or for infamous conduct and for an equally clear law to enable the restoration of diplomas or degrees; the enlargement of the Penal Cases Committee; and the laudable attempt to bring the nature of the examinations for higher diplomas and degrees under the supervision of the Council in the same way as the

examinations for pass qualifications. To discuss adequately the action of the Council with regard to these subjects, all of which were under its consideration during the recent meeting, would require a series of articles that might only cease with the advent of the November meeting. We can notice but a few of them and that cursorily.

Happily, the Council adheres to its determination to effect some decided rise in the standard of preliminary education. It is met with objections and opposition, more or less reasonable, from two sets of bodies—namely, bodies concerned in examinations in general education and the medical schools, including the universities. The College of Preceptors, which has for many years examined a larger number of intending medical students than any other body, naturally resented having its Second-class Examination (1st and 2nd division) regarded by the General Medical Council, in accordance with the report of its Education Committee, as of lower standard than that of the University Junior Examinations. The Council has taken the best step to secure justice and impartiality in this respect by authorising its Education Committee to procure the assistance of an expert on general education in determining the respective value of different examinations and in fixing a standard.

Another set of objectors have to be dealt with—those interested in the prosperity of medical schools. The progress of knowledge and the improvement in methods of education have involved sacrifice and expenditure on the part of many school authorities and teachers in the provision of schools and apparatus. They naturally are alarmed at any such straitening of the gate of the profession as will exclude a material portion of students now entering. The proportion which would be so excluded is differently estimated by different authorities. Principal MUIR, of the Edinburgh University, speaking with great personal authority and from a recent experience of the Scottish Universities in raising their preliminary standards, has said that, in the opinion of the Senatus, probably three-fourths of those who now enter would be excluded if junior or lower examinations were no longer recognised by the General Medical Council, say, in 1905. Dr. PATERSON, Dean of the Medical Faculty of University College, Liverpool, thinks that the "new and suggested" changes of standard would, by suddenly diminishing the numbers of medical and dental students, cause a serious diminution in the financial resources of the medical schools. In spite of such prognostications the general opinion, including that of many of the authorities concerned, is in favour of a steady rise of standard with due notice to all concerned. The due supply of medical students must be maintained, but there is ample room for elevation of the standard without in any way incurring the risk of unduly limiting the supply; and, after all, medical schools must learn to moderate their competition and to remember that students enter them to learn efficiently a profession the practice of which has to keep them, not to crowd each other into poverty and methods of practice inconsistent with the welfare of patients. We heartily approve of the action of the Council in seeking expert advice and extending the time of reference. It has always too much "nibbled" at this subject. It should now deal with it on principle.

Another great question brought to the notice of the Council by the Government has been referred to the Executive Committee—that of the recognition of the diplomas of foreign and colonial practitioners and the admission of their names to the Register. The Council has visions of an invasion of such practitioners of whose character it has no knowledge and over whose education it can have no supervision. It would be hard to submit our hard-worked brethren to such wholesale competition. On the other hand, our own registered fellow countrymen go into all countries and soon complain to the Government and to the General Medical Council if their British diplomas are not recognised. It is a case for some compromise. The most travelling and cosmopolitan nation under the sun cannot afford to be illiberal. Perhaps the solution may be found in the admission on a principle of reciprocity of a limited number of foreign practitioners. We cannot well refuse recognition to our colonies when they show equivalency of standard. The question on this occasion is raised by Italy. She asks through her Ambassador if there would be any objection to concede the full right of practice to an Italian practitioner here so long as he confined himself to his own countrymen. All would agree to this measure of recognition. But such a restriction is not legal, according to Mr. MACKENZIE'S opinion, under the Act of 1886.

One of the gravest defects in the powers of the Council was suggested at the late meeting, not so much by its lawyers as by certain members who thought they had discovered that the Council had no power of restoring a name to the Register where the diploma was only a single qualification granted before the Act of 1886, and it actually committed the inconsistency of restoring such a diploma in one case and refusing to do so in others. The existence of such doubts is the most urgent reason for such an amendment of the Medical Acts as will make temporary removal easy and safe. Amendment of the Medical Acts in any large sense is still not secured. But a remarkable division on this subject took place, on the motion of Dr. GLOVER, seconded by Sir WILLIAM THOMSON, to appoint a committee to consider and report on the necessary amendments of the Medical Acts. The motion was only lost by two votes, which justifies the belief that the Council is gradually awaking to the fact that it is not perfect either in constitution or in function. A somewhat sharp passage of arms took place on the subject of teaching in chemistry, physics, and biology in schools as distinguished from "scientific institutions," between the representatives of the English Conjoint Board, which recognises teaching in these subjects by many public and other schools, and those who object to any recognition of schools as places for teaching science. The Conjoint colleges in England maintain their sole responsibility for the efficiency of teaching in the subjects required in their curriculum and refuse to share it with the Council. In the end the Council by a large majority accepted the following somewhat ambiguous resolution:—

"No medical student shall be registered until he has passed a preliminary examination as required by the General Medical Council and has produced evidence that he has commenced medical study at a university or school of medicine or at a scientific institution recognised by one of the licensing bodies and approved by the Council."

Annotations.

"Ne quid nimis."

THE NEW SALE OF FOOD AND DRUGS BILL.

WE expressed doubt last week as to whether the new Food and Drugs Bill would become law this session. It may not even be "brought in," but some sort of a promise was given that the new Bill would be introduced, and as its introduction is bound to give rise to considerable discussion we are hardly hopeful that the division stage will be reached. That the proposed measure will receive strong opposition is evident from the spirit of the amendment which Sir John Leng proposes to move when the Bill is introduced. The terms of this amendment are: "That this House declines to proceed further with a Bill which violates the principles of free trade in the mistaken interest of a class of producers whom it will not benefit, is an unprecedented attempt by legislation to compel the production and sale of an inferior instead of a superior article, and denies the right of trial by jury in cases where heavy fine and imprisonment are proposed for merely statutory offences." In THE LANCET of April 1st we characterised the Bill introduced by Mr. Walter Long as a meagre and utterly inadequate measure and we suppose that it is only a half-hearted measure of this sort that Sir John Leng and his party would adopt as sufficient to protect the public against fraud and food impurity. Had this been the policy of the Founder of THE LANCET in his memorable crusade against adulteration we might have yet been without a Sale of Food and Drugs Act. Adulteration is not a thing of the past, it is carried on now to a scandalous extent, and increased legislative force is required to grapple with the evil. It is urged by some that to strengthen the present adulteration laws would be to paralyse certain trades. All we can rejoin is that if any traffic whatsoever can be shown to be fraudulent let it be paralysed. The Bill which it is proposed shortly to introduce to the consideration of the House is better than we thought it would be, although there are certain weak spots which we may briefly point out. The Grand Committee to whom was assigned the task of amendment was composed of persons having interests on both sides of the question. There were traders and there were representatives of the consumer besides scientific experts. We may take it, therefore, that the amendments proposed were not adopted without some struggle and the product may therefore be fairly regarded as satisfying the interests of both the trader and the community. We have again and again expressed the opinion that the recommendations of the Select Committee would never *in toto* be embodied in a Bill, but it remains to their credit that their very valuable inquiry has pointed out the direction in which correction of the present Act was most needed. At any rate, we see the influence of the opinions of this Committee in the new Bill. Take, for example, the question of the inadequacy of fines and the leniency of punishment. The Select Committee went so far as to suggest that the fact of a conviction should be posted on the offender's premises or advertised in the daily papers. The new Bill now proposes the infliction of heavier fines and in aggravated cases imprisonment with or without hard labour for a period not exceeding three months. We welcome further the clause which will ensure a more regular application of the Act and compel local authorities to put in force the powers with which they are invested. As is well known, the Act has proved a dead letter in many districts from sheer neglect of the authorities to avail themselves of its provisions. In the event of an authority failing to take advantage of the provisions of the Act the Local Government Board and the Board of Agriculture may take the matter in hand at the expense of the negligent authorities. We should like to see it laid down somewhat more definitely that in every district in the country a minimum ratio of samples to the population should be taken. The word "food" is to have a wider meaning and is to include "every article used for food or drink by man other than drugs or water and any article which ordinarily enters into or is used in the composition or preparation of human food, and shall also include flavouring matters and condiments." We fear that this provision will be weakened by the use of the word "ordinarily." The question of preservatives is again left open, pending, we suppose, the conclusion of a departmental committee now conferring; but in lieu of a Board of Reference, the creation of which the Select Committee recommended, the Board of Agriculture are to be entrusted with the duty of making regulations to determine what deficiency in any of the normal constituents of genuine milk, cream, butter, or cheese, or what addition of extraneous matter or proportion of water in these foods, shall raise a presumption until the contrary is proved that the milk, cream, butter, or cheese is not genuine or is injurious to health. This wordy provision seems to us to offer some hope of the question of standards and of preservatives being definitely approached. Regulations of this kind are to be notified from time to time in the *London Gazette*. There are other clauses dealing with the significance of an invoice as warranty, and exact rules are laid down as to the labelling of packages. On the whole we think the Bill should prove to be a fair and useful measure. It avoids a too drastic reform, on the one hand, against the interests of the trader, while it should be more effective than the present Act, on the other hand, in guarding the interests of the community. In a word, the new Bill affords a fairly satisfactory compromise between two conflicting interests and we should like to see it pass in order that the laws to suppress fraud and adulteration may be carried out more satisfactorily and that there may be more unanimity in magisterial decisions as to whether or not fraud or adulteration has been perpetrated.

THE LORDS AND THE LADIES.

THE progress, political and otherwise, of women must always be watched with interest by the members of the only profession which is, or is at present likely to be, open to them and the debate in the House of Lords with the adverse vote that followed it must naturally have been considered critically by many medical men who have been brought into contact with women in positions akin to those which it was sought to give them under the London Government Bill in the section which the House of Lords has thought fit to amend. Of argument there is but little to be found from a study of the debate that in any way answers the points made by Lord Salisbury, a statesman who can hardly be said to be hysterically sympathetic in his attitude towards the fair sex. He pointed out that the proposed councils differ but little from the vestries which they supersede and upon which women already sit and deprecated what he said amounted to a Parliamentary condemnation by turning them out of the seats and jurisdiction which they have hitherto held and exercised and that not on the ground that they have been unworthy of the trust reposed in them or done harm with their powers. He also dwelt upon their fitness for the exercise of many of the functions sought for them and the wide difference between these and the functions of legislators which eligibility to Parliament would confer on them. It must be confessed that there was nothing that was so effective in the answers made to the Prime Minister as the majority of 114 votes that emphatically

negatived his view. What the House of Commons will do remains to be seen. The wisdom of the House of Lords in taking so strong a line on such a question seems doubtful, although the municipal government of London is hardly a topic that rouses enthusiasm in the country at large, and local municipalities are not affected by the Bill. The surprising thing is that so many as 182 members of a class not usually keenly or actively interested in vestries and municipalities either in London or the provinces should have been found to follow the lead of Lord Dunraven in ousting women from the position which to some extent at all events she had already occupied, and for which she appears entirely fitted if her fellow citizens or fellow councillors choose to consider her so.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

THE forty-sixth annual report of the Royal Medica Benevolent College, an institution which is by far the most important medical charity in the land, shows by no means a satisfactory state of matters. Besides providing pensions for medical men and their widows it offers a sound education open to all, but supplying special advantages to the sons of medical men. To these latter 50 foundation scholarships are allotted. Unfortunately the balance-sheet of the College for the past year shows a deficit of £1901 mainly owing to the great expenses which have been necessarily incurred on new drainage works. Some £6000 a year is expended on the benevolent side of the work of the College and of this sum barely one-half is supplied by the medical profession. It must be recollected that modern foundations start under very different circumstances to the older foundations. The great schools of Westminster, Winchester, and Eton were either alumni of great ecclesiastics or were founded and endowed by Royalty. Additions to their incomes were made by pious benefactors in later years and so the endowment grew. But nowadays the would-be benefactor is so mulcted by the law to provide for schools and washing and reading rooms that except in rare instances, by the time he has paid his rates he has, or thinks he has, nothing left for charity. This should not be. If every member of the profession were to give even 5*s.* a year for a few years the foundation of the Royal Medical Benevolent College would be placed upon a firm financial basis. Let every one of us then do according as he is able. The office of the College is at 37, Soho-square, London, W.

STILTON CHEESE.

THE bacteriology of cheese appears to have been studied with some assiduity during recent years, but apparently it has thrown little light upon the secret of producing that most excellent cheese, Stilton. That Stilton cheese differs from all other cheeses everybody knows, but opinions are not wanting that Stilton cheese of the present day has not maintained the character of the cheese produced half a century ago when the demand was considerably less. It appears that the making of Stilton cheese, unlike the Cheddar and Cheshire cheese-making industries which can be traced back for several centuries, is of comparatively modern origin. The secret of success, however, in the production of Stilton cheese is still enshrouded in some mystery. A very interesting contribution on the subject appears in the June number of the *Journal of the Royal Agricultural Society* by Mr. J. Marshall Dugdale, who recently visited the Leicester districts, the principal centre of Stilton cheese-making, in the rôle of Commissioner of the Royal Agricultural Society. The further his inquiries were pushed, however, the more variations in methods of working came to his notice, so that he found it impossible to lay down any definite and precise rules for the making of Stilton cheese so as to suit every case. He has been able to point out certain methods of making and certain causes of failure. Practical experience appears to be the secret and this rule applies to everything. There is no reason why Stilton cheese should not be produced by those possessing the secret in any district other than Leicester or at Stilton in Huntingdonshire whence the cheese derived its name. There is no ground for the belief apparently that this cheese, like so many famed articles of food, owes its characteristics or excellence to environment. But a great deal may be done doubtless by studying the chemical and biological processes concerned in the elaboration of cheese and thus the cheese-maker may, as Mr. Dugdale points out, avoid the failures and bitter experiences of those who proceed on mere rule-of-thumb lines. We trust that as the knowledge of the subject increases the cheese-maker will have the process under such control as to render any resort to sophistication quite unnecessary and unprofitable.

SENSORY IMPRESSIONS IN THE BLIND.

A LONG series of experiments has recently been made by Professor H. Griesbach of Basle upon the relative acuteness of the senses of hearing, touch, taste, and smell in the case of the blind and those who possess normal vision. The results are contained in recent numbers of Pflüger's *Archiv* and the conclusions at which he has arrived are as follows. It may be premised that the observations were made on those who were otherwise healthy. In the differentiation of tactile impressions no remarkable differences were observed between the seeing and the blind, or if small differences did exist they were in favour of the seeing. In those born blind the tactile sharpness was somewhat less than in the seeing and in some cases the sensorium generally was equally defective. The blind in particular feel less acutely with the tip of the index finger than do those who see and in many cases the tactile acuteness of the two index finger-tips differs. In the blind, especially in the region of the hand, a stronger impression is required to produce a tactile impression than in those possessed of sight. In the capability of localising impressions of sound no difference exists between the blind and the seeing. In both great individual variations occur. As a rule both in the seeing and the blind the use of the organ of both sides gives better results than the use of one alone. No difference in the acuteness of hearing exists between the blind and those who see. No relation was observed between the acuteness of hearing and the power of localising sounds in either the seeing or the blind. No difference was observed in the two classes in regard to the acuteness of smell. In the execution of manual labour the blind become fatigued sooner than do those of equal age who see. The blind are more fatigued with manual than with mental work, which is not the case with the seeing of the same age. If any difference exists in regard to exhaustion after mental labour it is in favour of those of the same age who see. Both amongst the blind and the seeing there are persons who have many, others who have only a few, and others again who have no, illusory or erroneous impressions of touch. Of the parts of the skin examined fallacious determinations were most frequent over the zygomatic region and least frequent on the tips of the fingers. The number of errors both in the seeing and the blind rose with an increase in the number of the stimuli and with increase of pressure. Errors occurred more frequently both in the seeing and the blind with sharp than with blunt points, and in both errors were more numerous when the distance between the points of skin stimulated was small than when it was great. These results are in many respects opposed to generally received opinions, for it is usually

supposed that deprivation of sight leads to exaltation of the acuteness of the other senses, especially of the touch and hearing, yet in the 20 blind persons examined by Professor Griesbach this was not observed and it would hence appear that too much reliance has been placed by physiologists on certain exceptional cases where the sensitiveness to impressions on these senses has been unusually high. Further observations are, however, requisite before the conclusions arrived at by Professor Griesbach can be considered to settle the question.

THE WILLIAM F. JENKS MEMORIAL PRIZE.

THE College of Physicians of Philadelphia announce that the fifth triennial prize of $500, under the deed of trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on "The Various Manifestations of Lithæmia in Infancy and Childhood, with the Etiology and Treatment." The conditions annexed by the founder of this prize are, that the "prize or award must always be for some subject connected with obstetrics, or the diseases of women, or the diseases of children"; and that "the trustees, under this deed for the time being, can, in their discretion, publish the successful essay, or any paper written upon any subject for which they may offer a reward, provided the income in their hands may, in their judgment, be sufficient for that purpose, and the essay or paper be considered by them worthy of publication. If published the distribution of the essay shall be entirely under the control of said trustees. In case they do not publish the said essay or paper it shall be the property of the College of Physicians of Philadelphia." The prize is open for competition to the whole world, but the essay, which must be written in the English language, or if in a foreign language must be accompanied by an English translation, must be the production of a single person. The essay which must be sent to the College of Physicians of Philadelphia, Pennsylvania, U.S.A., before Jan. 1st, 1901, addressed to Dr. Richard C. Norris, must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay. The committee will return the unsuccessful essays if reclaimed by their respective writers or their agents within one year, reserving the right not to make an award if no essay submitted is considered worthy of the prize.

HEMIATROPHY OF THE BRAIN WITHOUT DISTURBANCE OF INTELLIGENCE OR PERSONALITY.

DR. PEARCE BAILEY of Columbia University, New York, gives an account[1] of a case worthy of record on account of its remarkable character and because it has important bearings on the localisation of psychical functions. A man, aged 57 years, a carpenter by trade, was, according to his own statement, strong and well up to the age of 47 years. His habits were temperate, he was free from syphilis, and was married and had children whom he supported. When he reached the age of 47 years or thereabouts he awoke one morning to find his left side numb and powerless. The ordinary severe symptoms of apoplexy were absent, but the paralysis was complete, so that the face was drawn to the right side (left facial paralysis) and the left arm and leg were entirely useless. After a while the facial condition began to improve, whereas the arm and leg began to undergo atrophy and contracture. There was little or no return of voluntary power in the affected side, and he remained thus crippled for the rest of his life. There was no defect in the action of the sphincters or in the special senses, and though the patient sometimes complained of feelings of numbness on the left side, no cutaneous anæsthesia could be found. As regards the psychical functions, speech was perfectly normal, the ability to read was not interfered with, and memory appeared unaffected. "He was courteous, intelligent, and patient, cheerful and attentive, his power of attention was good, he read the papers, ... took an interest in affairs, ... was fully conscious of his infirmity and bore it bravely, was free from depression or emotional excitability or apathy, cleanly in habits and person, and was free from the manifestations of mental deterioration so common in gross brain lesions." In the summer of 1897 he died from an intercurrent attack of pneumonia. The necropsy revealed the following conditions. The left cerebral hemisphere seemed normal. The right hemisphere in its post-Rolandic part showed slight general diminution (atrophy), the pre-Rolandic portion showed *extreme* atrophy and degeneration, the greater part of the frontal lobe being occupied by a soft œdematous mass—the remnants of the frontal lobe—which on section was of a dirty-white fibrous appearance and showed no grey matter. The basal ganglia of the right side were extremely atrophied, the right half of the pons was half the size of its fellow of the opposite side, and similar but less marked differences occurred in the bulb and below the pyramidal decussation. The anterior commissure seemed destroyed; the cerebellar lobes were equal. The basal vessels of the brain were thickened and atheromatous and the right anterior and middle cerebral arteries were cord-like with very small lumina. Microscopic examination with Nissl's method of the right frontal "mass" showed an œdematous vascular tissue and connective-tissue membranes but there were no traces of ganglion cells. The left cerebral cortex (various portions) showed normal nerve-cells slightly changed owing to the pneumonia. The right cerebral cortex (post-Rolandic parts) showed considerable scattered degeneration of cells in varying degrees, with an almost total absence of the large pyramidal cells and a general endarteritis of all the pial vessels. In the right hemisphere therefore while the nerve-elements of the post-Rolandic portion were much degenerated those of the frontal (pre-Rolandic) region were altogether destroyed. After referring to the views of Bianchi, based on experiments on dogs and monkeys,[2] on the frontal lobes—viz., as centres in which the kinæsthetic centres as well as the emotional states accompanying perceptions are secondarily represented, Dr. Bailey expresses the belief that mental disturbance need not necessarily occur if one frontal lobe is left intact, and the case quoted above is regarded as showing that one frontal lobe may be entirely destroyed without obvious disturbance of mental function or change in character. "The possibility suggests itself that the present synthesising function of the frontal lobes is to be sought exclusively neither on the right side nor the left, but that it is bilateral, and that under certain circumstances the function can be assumed and successfully carried out by the lobes of one side only."

[1] American Journal of the Medical Sciences, March, 1899.

HYGIENE IN HUNGARY.

IN the course of the year 1897 the Hungarian Board of Health held 25 plenary meetings besides 30 meetings of the committee, the work performed including categorical replies to 112 questions which were propounded by the Minister of the Interior. Utilising its right to initiate measures the Board also drew up two very important projects and sent them on for Ministerial approbation, one having reference to the prevention of venereal disease and the other to the means which ought to be adopted in order to lessen the ravages of tuberculosis, the latter including a scheme for

[2] Brain, vol. xviii., p. 591.

the establishment of working-class sanatoria. The sanitary authorities of a province having suggested that preventive inoculation with anti-diphtheritic serum should be made obligatory like vaccination the Board declared itself unable to support the suggestion. The duration of the immunity conferred by the serum was at best limited to a period of eight weeks and often did not last more than a few days. It was, however, desirable that infants and others whom it was impossible to separate from diphtheria cases should be inoculated, and the same precautionary measure might also be essayed with dwellers in the immediate vicinity of contaminated centres. Among the other subjects considered by the Board were the following: how to prevent the importation of the plague at Fiume; the desirability of establishing a bacteriological institute at that port; an inquiry regarding anti-plague serum; the hygiene of primary schools; the examination and modification of plans for four new hospitals; the best way of putting an end to charlatanism; and the sale of secret remedies which should be forbidden and that of specialities and cosmetics which should be ministerially controlled. With reference to the manufacture of matches the Board was of opinion that the sole way of stamping out phosphorus poisoning among the operatives was by prohibiting the employment of ordinary phosphorus. Only Swedish matches should be permitted and it would be well on hygienic grounds if the State were to exercise a monopoly in their fabrication. Out of 28 requests for permission to open industrial establishments of various kinds the Board refused 16 for hygienic reasons. We are indebted for the above notes to a report by Dr. Louis de Csatary, Ministerial Counsellor, which appears in the Parisian *Journal d'Hygiène*. In order to show the high esteem in which his professional brethren are held Dr. de Csatary appends a postscript to the following effect: "The President-Director of State railways in Hungary, M. Jules de Ludvich, Commander of the Legion of Honour, has recently shown how the medical faculty should be honoured by issuing an order that all consultants, as well as the other medical men residing in Budapest, were to have a right when travelling to first-class seats gratis."

GLASGOW UNIVERSITY CLUB.

A DINNER of the Glasgow University Club, London, was held on June 30th at the Trocadéro Restaurant, the special guest being Sir William Gairdner, K.C.B., Professor of Practice of Medicine in the University. Lord Kelvin, F.R.S., Professor of Natural Philosophy in the University and President of the club, was in the chair. The company numbered about 100. The chairman, in proposing Sir William Gairdner's health, said that their friendship was of long standing. By a strange coincidence they both graduated in the year 1845, Sir William Gairdner in medicine at Edinburgh and he himself (Lord Kelvin) in arts at Cambridge. Lord Kelvin then referred at considerable length to Sir William Gairdner's labours in the cause of sanitation and to the valuable public services which he rendered as the first medical officer of health of Glasgow, a position which was entrusted to him not long after his appointment to the University professorship in 1862. It was largely due to him that in about four years after his arrival the City of Glasgow Improvement Act was passed, an immediate result of which was a great amelioration in the public health of the city owing to the demolition of insanitary buildings and the better housing of the industrial classes. Sir William Gairdner, after thanking the chairman and company for the manner in which he had been received, said that in looking back on his career he could not help feeling that throughout the whole of it he had been guided by the same impulses and ideas that guided him when he was a young man. He remembered distinctly that from the very beginning of his professiona life his aim was to be a physician and a teacher of medicine, but it was many years before he occupied a professor's chair—in fact, he was 38 years of age when he came to Glasgow University, although he had been a teacher in the Edinburgh School of Medicine long before that. Lord Kelvin, on the other hand, was a professor at 22 years of age. After a eulogy of matrimony Sir William Gairdner went on to speak of the revolution in medical teaching which had occurred within his recollection, meaning thereby the development of laboratory instruction and the tutorial system. The outlay of a medical school was accordingly much increased and he urged his hearers to keep in mind the need of the university for continuous and increased support, a need to which the citizens of Glasgow had been responding liberally for 40 years. Another matter to which they ought to give their attention was the prosperity of the club and the extension of its influence. Professor W. Ramsay proposed the toast of "The Houses of Parliament," which was replied to by Lord Shand and Mr. J. A. Campbell, M.P. The toast of "The Visitors" was proposed by Mr. Hutchinson and acknowledged by Sir Joseph Fayrer and Sir William Broadbent. Dr. Heron, in an effective speech, proposed the health of "The Chairman."

ASPHYXIA UNDER CHLOROFORM DUE TO TETANUS.

ONE of the more unusual causes of death under chloroform is exemplified by the case of a patient at the London Hospital who died whilst being chloroformed for the intra-cerebral injection of serum for the relief of tetanus. The man was admitted for treatment as he had lockjaw and chloroform was given that the ulcer on his leg—the infected focus—might be excised. During the inhalation he had a tetanic convulsion and artificial respiration was performed. This brought him round. Later in the day it was decided to inject the antitoxin intra-cerebrally and with this view he was again given chloroform. As on the former occasion a tetanic convulsion supervened during the induction of anæsthesia and death from asphyxia resulted. Such terrible cases are fortunately rare and tax the resources of the anæsthetist's art. Opening the trachea and careful perflation of the lungs with oxygen appear to offer the best chance of saving life in these emergencies.

SHANGHAI SANITARY DISTRICT.

WE have received from Dr. Arthur Stanley his annual report of public health in the Shanghai sanitary district for the year 1898. The foreign population of this settlement during 1898 was estimated at 5240 and the native population at 317,000. The death-rate among the resident foreign population—six months spent continuously in Shanghai being held to constitute residence—was for 1898 16·2 per 1000 and that among the native population 9·87 per 1000. This very low rate is in large part due, in the opinion of the medical officer of health, to the great predominance of young adults among the Chinese population. The methods of enumerating both the population and the deaths are doubtless also open to criticism, the native death reporters, who make house-to-house inquiry and watch the coffin shops, being relied upon for the registration of deaths. As to infectious disease Dr. Stanley reports 75 cases with seven deaths of enteric fever amongst the foreign population, this disease being much more prevalent, but less fatal, than in England. In his remarks upon plague the medical officer of health doubts if Shanghai is in a better condition for resisting the disease than was Bombay. He advocates strongly the necessity of improving the sanitary condition of the settlement and he points out

that no military cordon, compulsory isolation, or segregation could be applied—a fact which renders Shanghai in a worse position than either Bombay or Hong-Kong. He thinks that if the foreign population were inoculated by Haffkine's method at the beginning of an outbreak they could be protected. In the matter of vaccination against small-pox, lymph is used which is guaranteed free from tubercle and from organisms. The lymph is freshly prepared fortnightly by the inoculation of calves of foreign origin and it is then kept with glycerine until sterile. Shanghai should, Dr. Stanley considers, be a distributing centre for vaccine lymph. Are there not, he adds, 400,000,000 Chinese waiting to be vaccinated? 155 cases of dysentery were notified in Shanghai during 1898, and there were but four deaths. From a comparison of the fatality-rate of dysentery in Shanghai with that which obtains in Japan and India Dr. Stanley is inclined to think that in Shanghai much diarrhœa of a non-dysenteric character must be notified. There was an outbreak of beri-beri in the police cells in the Hongkew Station which was much overcrowded, and the provision of a suitable prison for convicts is advised, in order to prevent outbreaks of this disease in the future. The Shanghai Public Health Laboratory has proved itself most useful during the year. It is proposed in future to prepare in this laboratory tuberculin, mallein, diphtheria, and enteric fever antitoxic sera and also Haffkine's cholera prophylactic. The water-supply of Shanghai is procured from the Yantse which is merely, it is alleged, the diluted sewage of the Yantse Valley. The sand filtration practised is said to be imperfect and Dr. Stanley suggests the use of Berkefeld or Pasteur filters. It is of interest for us in the United Kingdom to note that in Shanghai no meat is allowed to be exposed for sale in any shop supplying foreigners unless it bears the municipal stamp, while the native pork shops and stalls are on certain conditions licensed. Much buffalo milk is used in Shanghai and analysis shows that it is remarkably well suited for infants and invalids.

THE METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

IN these days when all wise people are trying to put the medical attendance of the industrial classes upon a respectable basis a word of encouragement is due to the managers of the Metropolitan Provident Medical Association. They have about 20 branches and half of them are self-sustaining. They have tried to realise some of the most essential points in such institutions by giving a large share of the money received to the medical staff, by a system of coöperation with certain hospitals securing to the members priority of treatment, and by arrangement with the Hospital Saturday Fund securing proper advice to applicants for its letters as to the special needs of their cases. Of the £5300 received from provident members' payments last year £3279 went to the medical officers, £500 were spent in drugs, and £880 were paid to dispensers. It is supposed that the members are of such a class that if they were not brought into a provident institution of this kind they would drift into the out-patient department of a hospital or would in some other unsatisfactory way evade due payment of the general practitioner. This is so far good, but it is not quite satisfactory. It still leaves unaccounted for £641 or so which should find its way to the medical officers. We do not know how much per member is charged, whether the charge for attendance on women and children is equal to the amount for men as it should be, or whether care is taken not to canvass for the patients of medical men. We notice with much satisfaction that the Royal Free Hospital, St. Thomas's Hospital, St. George's Hospital, King's College Hospital, and the London Hospital are on terms of friendly coöperation with the association. It is most important that those who are responsible for the administration of hospitals should bring them into harmonious coöperation with medical institutions or with practitioners in their neighbourhood who treat patients on paying and self-respecting terms. Hospitals are admirable institutions for the occasional emergencies of life, but a continuous family medical attendant who may be consulted at any time is indispensable to the poor as well as to the rich.

THE INTERNATIONAL MEDICAL CONGRESS, PARIS, 1900.

A MEETING of the National Committee for Great Britain and Ireland which has been formed to further the interests of this Congress was held at the rooms of the Medical Society, 11, Chandos-street, Cavendish-square, W., on July 4th, Sir William Mac Cormac, Bart., K.C.V.O., President of the Royal College of Surgeons of England, being in the chair. The rules, regulations, and preliminary agenda of the Thirteenth International Congress were presented and were ordered to be distributed among those likely to be interested in the meeting. It was decided after some discussion that Messrs. Thomas Cook and Co., tourist agents, should be asked to arrange for the conveyance of intending members of the Congress, and, failing any satisfactory arrangements by the local committee in Paris, that the same firm should be invited to find accommodation. The honorary secretaries (Dr. A. E. Garrod, 9, Chandos-street, Cavendish-square, W., and Mr. D'Arcy Power, 10A, Chandos-street, Cavendish-square, W.) were authorised to receive the fee (£1) for membership and they were directed to inform those members who wished to make a communication to the Congress that papers should be sent straight to the sectional secretaries in Paris. Other information on the subject will be found on p. 118.

THE DIAGNOSIS OF SMALL-POX.

IT is difficult for the most intelligent practitioner to diagnose a disease which he hardly ever sees. Small-pox in particular is one of the diseases which it is sometimes difficult to diagnose in its early stage. Now that small-pox is for years together almost absent the diagnosis threatens to become a lost art to the injury of Her Majesty's subjects and to the discredit of the profession. The report of the Metropolitan Asylums Board for the year 1898, of which we hope to give an early notice, shews that in that year only five cases were treated in the small-pox hospital ships. 36 cases were sent certified as such, but in six only was the diagnosis confirmed at the wharf and the cases sent on to the ships. And in one of these cases the diagnosis on the wharf was negatived by that of the medical officer of the ship. This gives a percentage of errors of diagnosis of 83·3 of the total cases certified. Yet any day we may be overpowered with an outbreak of small-pox when correct diagnosis becomes most important. The great thing is for the practitioner not to be in a hurry. For the first two or three days the symptoms of small-pox are very much those of other infectious diseases—rigors, sickness, high temperature, and pain in the back. A rash may then appear. It may not be at first papular but erythematous, urticarious, rubeolous, or even hæmorrhagic. Of the distinctive symptoms of initiatory illness in small-pox Sir Thomas Watson laid stress on sickness, often violent. But this occurs also in scarlet fever and sometimes in measles. Severe pain in the back with pyrexia is a very suspicious symptom and when the disease is epidemic should put us on our guard. The great thing is not to decide hastily but to wait for the development of the shotty papules following the initiatory symptoms mentioned which appear on the face on the third day, then on the neck, wrists, and elsewhere.

There is really no pathognomonic sign or symptom and the wise course is to take time and judge not by the preliminary eruptions which occur in some cases, but by the actual papules, and then to make sure that these are not the papules of varicella, as they turned out to be in 17 of the 31 cases erroneously sent as cases of small-pox. Where there is any doubt it is a safe thing to re-vaccinate grown-up persons in the family and to exclude all visitors. Another sound precaution is to take counsel of a professional neighbour and to discuss the *pros* and *cons* with him. There is really no discredit in a modest error of diagnosis, but he practitioner who can avoid it and who can fairly early make sure of the diagnosis of small-pox is a benefactor.

WHAT IS GENUINE BRANDY?

THIS question is of some importance in medicine since brandy is so frequently relied upon as a stimulant and restorative in cases of collapse. Some hold that the stimulating and restorative effect is referable chiefly to the alcohol, but there can be no doubt that these effects are enhanced or diminished by a greater or less proportion of other bodies chiefly of the ether type. The product of the fermentation of grain like malt, rice, and maize is singularly destitute in these secondary ethereal bodies which are elaborated in important quantity during the fermentation of grape juice—in other words, in the alcohol derived from grape juice there are so-called wine ethers, while in the alcohol from grain these bodies are conspicuous by their absence. To some extent, therefore, a wine spirit can be differentiated from a corn spirit by chemical analysis. Clinically, this point of difference in regard to ethers is of some importance. The stimulating effects of ethers are well known and it is conceivable that when the ethers are exhibited in alcohol their effect is increased. Brandy, we maintain, should be the spirit distilled from wine, but nowadays this is the exception rather than the rule. It is easy to flavour a spirit derived exclusively from grain which on tasting gives the impression of being genuine brandy. It will be less ethereal, if ethereal at all, than grape-derived spirit and *a priori* a less powerful restorative. In medicine, therefore, the question of what is and what is not brandy is a serious one. For purely medicinal purposes it is desirable that the spirit used should be derived from the grape and contain, therefore, those ethers which in association with alcohol may make all the difference whether collapse is successfully or unsuccessfully withstood. We have pointed out again and again that in spite of the ravages of the phylloxera in the Charente district in France which commenced in 1876 the importation of "cognac" for this country increased rather than diminished, which leads to but one conclusion—viz., that this increase could only be due to the importation of fictitious brandy. It is only comparatively recently that the celebrated French vineyards have recovered and it is to be hoped that the importation of genuine brandy from this district may be re-established. We have dealt with consular reports from time to time showing how impossible it was that France could be exporting genuine wine spirit into this country. In the meantime we drew attention to the fact that excellent brandy and genuine wine spirit could be obtained from Australia, California, and Spain in abundant quantity and at a moderate price. Of course, it could not correctly be called cognac, but such a spirit has undoubtedly a greater claim to the term "brandy" in the sense in which we have defined it than the bulk of spirit sold in this country under that name. This is a fact which we have placed before our readers for some years, as a reference to our columns and to the Analytical Records of THE LANCET Laboratory will show. The subject was discussed with greater detail in THE LANCET Analytical Commission on Sherry in which incidentally it was shown that wine spirit was produced in Spain in abundant quantity and of excellent quality, one of our Commissioners having inspected the processes of distillation on a large scale in the Jerez district. The same subject has been approached by Sir Charles Cameron and Dr. W. R. Smith in a paper published in the June number of the *Journal of State Medicine*. The preamble of this paper is devoted to the ordinary elementary chemistry of the alcohols which will be found in most text-books. Then follows a table of statistics compiled from official sources on the amount of wine and brandy produced in the Charente district, the output of the latter having increased in those years when little or no wine was produced. As we have shown this has long been common knowledge. The analyses of French brandy and spurious brandies are then given and contrasted with the mean results of some analyses of specimens of Spanish brandy distilled by a particular firm at Jerez in Spain. It is a pity, we think, that the writers have based their investigation upon only one product; they might have extended with advantage their experimental inquiry to further samples distilled by other Spanish wine producers and to some types of brandies produced in the colonies and elsewhere. In the analyses given the amounts of aldehyde and furfurol are recorded but the clinical significance of these bodies is not described. We attach no importance to the figures recording the amount of these bodies because neither aldehyde nor furfurol can be estimated by chemical analysis with any precision. Apart, however, from the fact that this contribution might have been more complete it affords some additional confirmatory evidence of the advantages which we have pointed out for some years in these columns of employing in clinical practice a genuine brandy—that is, a wine-derived spirit as opposed to a spirit of a relatively non-ethereal character and derived almost exclusively from grain, the flavour being compensated in some measure perhaps by the addition of a small proportion of what is now exceedingly rare—real old-matured cognac.

THE PATHOGENIC ACTION OF BLASTOMYCETES.

THE exact study of the pathogenic action of blastomycetes is a comparatively recent branch of pathology. In the *Journal of Pathology and Bacteriology* for May Mr. Alexander G. R. Foulerton published a valuable contribution on this subject which has since been reprinted in pamphlet form After a careful review of the literature hitherto existing on the subject Mr. Foulerton describes his own experiments. In the first series fresh cultures of various known varieties of yeast were used, but in the second series he used a hitherto undescribed yeast which was isolated from the mucus of the throat in several cases of pharyngitis. He found that this yeast was actively pathogenic for tame mice and rabbits, pathogenic in a less degree for guinea-pigs, whilst its action upon tame rats was a matter of some doubt. The anatomical results of yeast infections are then described, those following infection with saccharomyces tumefaciens alba being more particularly selected. The tumours formed at the site of inoculation and the secondary nodules were histologically granulomata. When the primary tumour was situated in the subcutaneous tissue it was usually free from any intimate connexion with surrounding parts and could be easily dissected out. When the injection was made into a muscle the tumour could also be separated out from the surrounding fibres, but always with small pieces of the muscle substance adhering to it in places. On microscopic examination it was seen that the tumour and nodules consisted of collections of round cells, all of which were mononuclear; there was also a varying

amount of homogeneous fibrinoid ground tissue throughout the formation. Rarely what appeared to be very large tissue cells containing several yeast cells were seen. These large cells were apparently not multinuclear and did not correspond morphologically with the typical "giant cell." In these granulomata was found in most cases an abundance of the yeast inoculated and from them sub-cultures of the parasite in glucose agar were readily obtained.

CAMBRIDGE GRADUATES' MEDICAL CLUB.

THE sixteenth annual dinner of this club was held on July 3rd at Limmer's Hotel. Dr. Howship Dickinson, the President of the club, occupied the chair. After the usual loyal toasts the chairman proposed "The Club." In his speech he alluded to the great loss which Cambridge University and the club had sustained during the past year by the deaths of Professor Kanthack and Dr. Hare. The toast of "The Guests" was proposed by Sir Michael Foster. Response to the toast was made by each of the three guests of the club—Dr. Church, Sir W. Mac Cormac, and Professor Sims Woodhead. Dr. Ewart proposed "The Health of the Chairman," to which Dr. Dickinson briefly replied. There was a very good attendance of members and their guests.

THE LANCET COMMISSIONS ON PLUMBERS' WORK AND WATER-SUPPLY AND DISPOSAL OF SEWAGE.

OUR worthy contemporary the *Builder* has just done us the honour of reviewing the report of our Commission on "The Relative Efficiency and Cost of Plumbers' Work," published in THE LANCET of July 4th, 1896, and recently reprinted, together with a second report dealing with "Water-Supply and Disposal of Sewage in Rural Districts" published in THE LANCET of March 4th, 1899. We fear, from a perusal of the kindly meant if slightly inaccurate comments thereon, that the extremely technical nature of the inquiry has led to some little confusion in the mind of the reviewer, or possibly some temporary fit of abstraction prevented his noticing the illustration of a "Syphonic" water-closet described on page 87 of our report. Evidently he has not seen this, for he says that the only excuse for its omission is the fact of our report having been published three years ago. He will not, however, upon the same grounds excuse the absence of any allusion to tinned iron pipes. Could we have anticipated the anxiety of our contemporary to have had these pipes recommended we would have strained a point and done so as they are by no means devoid of merit. In one other instance, referring to the depth at which subsoil drains should be laid, the consideration of the context should have led the reviewer to a conclusion other than the one at which he has arrived. No sane man would expect sewage to soak through two feet six inches of stiff adhesive clay. Our thanks are, however, due to our contemporary for what is, with these exceptions, a very fair criticism.

THE HASLAR HOSPITAL APPOINTMENT.

THE reply of the First Lord of the Admiralty to Captain Norton in the House of Commons on Tuesday, July 4th, regarding the recent appointment to the Royal Hospital at Haslar must have been a surprise to naval medical officers generally and a source of disappointment in particular to the inspector-general grade of the Royal Navy Medical Service. Captain Norton asked the First Lord whether a deputy inspector-general had recently been appointed in charge of the Royal Hospital at Haslar instead of an inspector-general, though there were three officers of the latter rank available for service at Haslar; and if such appointment had been made would he explain why the three inspector-generals had been passed over. Mr. Goschen's reply was both clear and emphatic. It was in effect that the facts were as stated and that the reason for his choice was his determination to select the best man he could find, irrespectively of seniority or etiquette, for the administration of the great naval hospital at Haslar which he regarded as one of the most important hospitals in the kingdom and for the efficiency of which he was responsible. From the nature of the foregoing reply it is clear that Mr. Goschen not only accepted the entire responsibility for the appointment of a deputy inspector-general instead of one of the three inspector-generals on half-pay available for and awaiting service, but we are led to infer, moreover, that the selection of the officer in question for that post originated with him. It certainly seems curious that there should be no officer of the rank of inspector-general in the medical service of the navy with the special qualifications and experience necessary to fill such an admittedly highly important appointment as that of Haslar Hospital. Officers of that grade have hitherto filled it and when they were promoted to their present rank they must naturally have regarded such promotion as a kind of official assurance of their fitness for holding any position or appointment implied by their rank.

SUDDEN LOSS OF HAIR DUE TO MENTAL SHOCK.

IN the *Progrès Médical* of June 17th M. Boissier relates the following remarkable case which is an addition to the group of cases in which sudden loss of hair or change of its colour followed mental shock. The subject was a vigorous peasant, aged 38 years, who was not of a nervous temperament beyond being slightly emotional. His hair was abundant and of a dark chestnut colour and not even slightly interspersed with white filaments. One evening as he was returning home preceded by his mule on which was mounted his son, aged eight years, the animal slipped and the child was thrown off and trampled on several times. He was only severely bruised but the father thought he was killed and in endeavouring to save him was terror-stricken. He trembled and had palpitations and a feeling of cold and tension in the face and head. On the following day the hairs of the head, beard, and eyebrows commenced to fall in quantities so that after eight days he was absolutely bald. At the same time the skin of the face and head became paler. Without delay the hairs began to grow again in the form of a colourless down. Soon all the affected regions were covered with finer, more silky, and a little more thinly sown, completely white hair. The hair of other regions was not affected.

THE TREATMENT OF INCONTINENCE OF URINE BY DISTENSION.

THIS treatment, advocated in the *Boston Medical and Surgical Journal* of June 15th by Dr. George Haven, seems well worthy of trial. Those cases of juvenile incontinence of urine which persist after puberty are the opprobrium of practitioners. On the theory that when the patient is healthy and the urine is normal diminished capacity of the bladder is the cause of the symptoms Dr. Haven tried gradual distension in two cases. A girl, aged 17 years, had nocturnal incontinence of urine since birth. During the day she could retain urine for only an hour. The bladder was distended every other day by injecting a 4 per cent. solution of boric acid to the point of discomfort. At first it held eight ounces under pressure. After six weeks 20 ounces could be introduced. The patient was completely cured of the incontinence. A girl, aged 18 years, had nocturnal incontinence of urine since her earliest days.

At first the bladder held three and a half ounces and six ounces caused pain and discomfort. At the time of the last observation it held 20 ounces and there had been no incontinence for 16 days. Dr. Haven introduces the fluid by connecting a syringe with a male catheter and takes the resistance of the bulb as a guide to the pressure in the bladder. It seems to us that a safer and better plan would be to distend the bladder by hydraulic pressure for then the force used could be accurately graduated. Dr. Sims the younger appears to have been the first who recommended this treatment by distension.

THE RIGHT OF SCOTCH PARISH MEDICAL OFFICERS TO APPEAL TO THE LOCAL GOVERNMENT BOARD.

WE learn that Mr. Alexander Cross, M.P., has recently introduced into the House of Commons a Bill to amend the Local Government (Scotland) Act, which among other provisions will give to medical officers of parishes in Scotland the right of appeal to the Local Government Board against dismissal by parish councils, thereby placing them on a similar footing with parish medical officers in England and Ireland. It is only right that this should be so, not only on the score of an equable administration in all divisions of the kingdom, but in fairness to these officials in Scotland. Without any disrespect to parish councils they are often made up of a number of gentlemen possessed of but little medical knowledge and without the experience and judgment necessary to pass an opinion on matters medical. Moreover, in the nature of things they are constantly changing and are apt to overlook the past services of a medical officer when any trivial cause of friction arises. We have on several occasions pointed out the advantage to the Poor-law medical service which accrues from continuity and permanence in the tenure of office. It takes some considerable time for a medical man to acquire the special experience necessary for the efficient discharge of some of the duties attaching to these posts and frequent changes are undesirable on several grounds. The proposed amendment in the law, therefore, has our approval and we trust that medical members of the House will see their way to support the measure.

THE FIRST SIGNS OF MEASLES.

THE vagaries often exhibited in the development of the rash of measles have recently given rise to some discussion. In the *Journal de Clinique et de Thérapeutique Infantiles* of June 29th M. Deschamps and M. Talamon have both contributed articles on the subject. The former describes under the name of "pre-morbillar erythema" a punctate or patchy rash appearing on the skin four or five days before the general eruption. This, he suggests, may be due to the independent interference of a streptococcus and he quotes the preliminary erythema of small-pox as a parallel condition. M. Talamon, on the other hand, is disposed to regard these early eruptions as the true offspring of measles acting, though still imperfectly, as a skin irritant. Their occurrence and the doubt in which they may involve a diagnosis have induced him to seek for a more certain indication of their character and this he thinks he has found in the so-called "spots of Koplik."[1] These spots, which have also been observed by Heubner and Ilawyk in Germany, consist of small pale-bluish points in the centre of a rose-coloured streak and are to be found, according to Dr. Koplik of New York, on the inner surface of the lips and on the gums from one to five days before the proper measles rash appears. It is noteworthy in this connexion, however, that M. Talamon himself records a case in which a slight measly eruption appeared on the face without the signs of coryza, fever, or general eruption (all of which developed later), and even some hours before the spots of Koplik were observed, though these were looked for. Such spots, however, would seem to be as a rule the earliest signs of the disease and to be observable even before the familiar faucial patches. We agree with M. Talamon that neither they nor the "pre-morbillar erythema" require to be explained by a hypothetical streptococcus. Both should rather be regarded as the early signs of an eruption still struggling to reveal itself and one which, being, moreover, the result of an inhaled poison, is naturally first seen on the mucous membrane.

[1] THE LANCET, Nov. 19th, 1898, p. 1348.

WE are glad to see that Mrs. Kanthack's name is on the list of the latest pensions charged upon the Civil Establishment. She receives a pension of £60 a year "in consideration of the eminent services rendered to science by her late husband Dr. A. A. Kanthack, Professor of Pathology in Cambridge University," and medical men knowing the great value of those services will thoroughly endorse the grant.

THE Albert Medal of the Society of Arts for the present year has been awarded by the President and Council to Sir William Crookes, F.R.S., "for his extensive and laborious researches in chemistry and in physics—researches which have in many instances developed into useful and practical applications in the arts and manufactures."

THE bazaar recently held at the Hotel Great Central on behalf of St. Mary's Hospital resulted in the splendid total of £21,500 being realised. An anonymous friend paid the expenses, amounting to £584, and thus enabled each centre and stall to have the full fruit of their effort.

A CONVERSAZIONE will be held at the Royal Institute Galleries, Prince's Hall, Piccadilly, on Wednesday evening, July 19th, at 8 P.M., the occasion being the prize distribution of the Dental Hospital of London by Sir Richard Douglas Powell, Bart.

THE Committee of University College Hospital, Gower-street, W.C., announce that the institution will be closed during the month of August with the exception of the Maternity Department.

WE learn with satisfaction that the Senate of the University of London has assented to the proposals for the establishment of the University in the buildings of the Imperial Institute.

"A CHILDREN'S Fair in Flowerland," in aid of the London School Nurses' Society, is to be held at the Highbury Athenæum to-day, Saturday, July 8th, between the hours of 4 and 7 P.M.

SURGEON-GENERAL COLVIN SMITH, C.B., I.M.S., retired, has been appointed Honorary Surgeon to the Queen in place of the late Surgeon-General W. C. Maclean, C.B.

DR. R. C. BROWN, F.R.C.S., has undertaken to bear the whole cost of erecting and equipping a new operating theatre at the Preston and County of Lancaster Royal Infirmary.

DR. CLIFFORD ALLBUTT, Regius Professor of Physic in Cambridge University, has been made an honorary Doctor of Science of the Victoria University, Manchester.

H.R.H. THE DUKE OF CAMBRIDGE re-opened on July 5th the City Orthopædic Hospital after its rebuilding.

QUACKS AND ABORTION:

A CRITICAL AND ANALYTICAL INQUIRY.

XI.[1]

IT will have been observed that since the publication of our last article under the above heading, in which we dealt in detail with the goods sold by the firm trading as Madame Frain, five persons alleged to be responsible in various degrees for the conduct of this business have been arrested and charged at Worship-street Police-court with "having conspired together to incite divers persons, women, feloniously to administer to themselves divers drugs, poisons, &c., with unlawful intent." These persons have been remanded and admitted to bail, and it would be clearly improper for us to add to what we have already said with regard to their trade more than an expression of our intention to follow the proceedings against them with interest. But whether this particular trade carried on under the name of Frain has been a criminal one or not we may be allowed to reiterate what we have already said—that the advertising of quack medicines professing to "cure female irregularities and suppressions" is a source of revenue to which no respectable newspaper should condescend, (1) because such advertisements may be a means of introducing pregnant women to persons willing to procure abortion upon them, in support of which we point to our own correspondence with Ottey and Leslie (who, by the way, have not, so far as we know, been proceeded against), and to their letters and documents published in our second article[2]; (2) because whatever may be the intention of the vendor the goods are liable to be bought by women with an unlawful intent; and (3) because such advertisements are, if not invariably at any rate with notorious frequency, associated in the lowest class of journal with scandalous advertisements of so-called "cures" for lost virility, "boons to weak men," quack remedies generally for venereal disease, and indecent photographs and literature and the like.

We conceive that whatever may be the immediate result of the Frain prosecution to the persons most interested it will considerably diminish the trade in cures for "Female Irregularities" and perhaps effect a more than corresponding diminution in the number of newspapers which will accept advertisements of these nostrums. That the trade will altogether cease or that no newspapers will be found ready to make a disreputable profit by advertising it is, perhaps, too much to expect until a prosecution has been undertaken against some journal which has inserted something more flagrantly plain-spoken than usual. If undertaken with success such a prosecution would, we believe, stamp out all advertisements bearing any resemblance to the one selected for attack and with their extirpation would reduce the trade to a minimum. Even the profits obtained by selling a mixture worth a few pence for sums varying from 4*s.* 6*d.* to half a guinea would not amount to much in the year if the business were not pushed by wholesale advertisements, chiefly appearing in journals published at a distance from the vendor's establishment. It seems so easy and safe for a woman to send off a postal order and to receive a bottle from a place 100 miles away under the often-repeated pledge of secrecy and security from observation.

[1] Articles I., II., III., IV., V., VI., VII., VIII., IX., and X. were published in THE LANCET of Dec. 10th, 17th, 24th, and 31st, 1898, and Jan. 21st, Feb. 4th, March 11th and 25th, April 1st, and June 24th, 1899.

[2] THE LANCET, Dec. 17th, 1898.

"THE PROPOSED REGISTRATION OF MIDWIVES."

THE President of the Wood Green and District Medical Society has forwarded to us for insertion the following *précis* of Mr. George Brown's speech to the joint meeting of that society and the East Suburban Medical Protection and Medico-Ethical Society, Limited, at the West Ham Hospital on June 15th (*vide* THE LANCET, June 24th, p. 1732, and July 1st, p. 63).

Mr. GEORGE BROWN said: "I had some hesitation in accepting the invitation to attend this meeting, having regard to the resolution on which it is based relating to Mr. Horsley, but as I know Mr. Horsley is very well able to take care of himself I thought my presence here in response to your courtesy would not be misunderstood. Some here to-day may not have voted for Mr. Horsley when a candidate, but all must acknowledge that he has done yeoman's service to the profession, and whilst we, in fact, represent you on the Council it is just that we should receive your full support, and it is most helpful to us to know that you take such keen interest in the work of the Council. Mr. Horsley has admirably explained the position as he views it of the midwives question: 'The legislation proposed by the present Bill before Parliament is bad; but it appears it is to go forward, and therefore we must do what we can to make it as harmless as possible'; and if there is a chance we must keep it from becoming law, and I hope you will use your best endeavours to do so. If these women are given power they will ignore the safeguards if they can. Safeguards on paper are of no value unless they can be made effective in practice by providing authority charged with the duty of seeing that the provisions intended to safeguard the public are carried out. If midwives are recognised by law as competent to attend midwifery it will be useless to lay down regulations that they must send for doctors in cases of difficulty. Even now, when they have no legal status, many midwives contend that they are fully as competent as any medical practitioner and apparently think it more fitting that doctors should send for them when in difficulties than that they should send for medical assistance. In the interests of the public as well as of the profession we must do our best to prevent the practice of midwifery or of any other branch of medical practice by unqualified persons. It is absurd to say that there are not sufficient doctors to attend cases. We need no legislation to assist unqualified persons. I always feel that there is great responsibility in these cases, and it is monstrous to allow any but fully-qualified and educated persons to undertake these responsibilities of the lying-in chamber. Registered students ought to attend poor persons under supervision, otherwise a stop should be put to the practice of midwifery by unqualified persons. It is a pity that we have not more medical men in the House of Commons having regard to the frequency with which measures affecting the medical profession are before Parliament. Our Medical Council should be more representative of the body of the profession than it is and it is time there should be a reform in the method of electing the representatives of the corporations. With regard to the Bill dealing with the registration of midwives which has been approved by the Parliamentary Bills Committee of the British Medical Association I am opposed to all legislation of the kind, but, like Mr. Horsley, I have served on the committee which considered the Bill in the hope that I might assist in rendering it less mischievous than as originally proposed. The evil of allowing a Bill to be brought forward by the British Medical Association is that it gives the promoters of midwifery legislation grounds for saying that the profession is in favour of registration, whereas the profession as a body does not desire anything of the sort."

Mr. Horsley's address and the resolutions adopted by the joint meeting have already been reported in THE LANCET.

HOME FOR CONFIRMED INVALIDS, HIGHBURY-PARK, LONDON, N.—The fifty-sixth annual report of this institution announces that a new Home, No. 1, Highbury-terrace, has been opened and 11 patients have already been admitted. Applications for admission are very numerous. Since the accounts for the present year were closed the total debt to the London and Provincial Bank, thanks to the Albany Fund, has been reduced to £2000 and there is now a sufficient credit balance on the extension fund account to enable the council to complete the furnishing of No. 1, Highbury-terrace. Mr. Lorimer, the leaseholder of No. 2, Highbury-terrace, has intimated that he would be willing in order to assist the charity to cancel the remainder of his lease. Unfortunately, even in addition to the £1000 promised by Mrs. Kennedy, a further sum of £2000 is still required to pay off the existing liabilities and until these have been satisfied the council do not feel justified in incurring further responsibility, much as the increased accommodation is required. It is hoped that the friends of the Home will make an effort to provide the necessary funds, because Nos. 1 and 2, Highbury-terrace, would together accommodate 30 patients and could be carried on much more economically than No. 1 alone can be for only 12 patients.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On Epidemic Diphtheria in the Borough of Tunbridge Wells. By Dr. G. S. BUCHANAN.[1]—The excessive prevalence of diphtheria in Tunbridge Wells last year, to which and to associated insanitary circumstances attention was called at the time in THE LANCET, has now been reported on by Dr. Buchanan. It would seem that the immediate occasion of the inspection of this town for the Local Government Board was the failure of the town council in the first instance to inform the central health authority of the existence of the diphtheria epidemic and the futility of subsequent attempts in the reports which they transmitted to minimise the gravity of the outbreak. However this may be, there can be no doubt from the facts stated in this report that from the beginning of 1898 to the end of September there was a serious and sustained epidemic, 251 cases of, and 30 deaths from, diphtheria being notified during this period. The population of Tunbridge Wells is estimated at under 30,000.

Dr. Buchanan draws attention to the numerous illustrations of infection from person to person in this epidemic. Thus "at least a third of the 251 notified cases had occurred in dwellings from which a case of diphtheria had been previously and recently notified"; also, there was evidence of infection spreading by personal communication between children of adjoining dwellings and definite indications that at the beginning of the outbreak the operations of two public elementary schools had a large share in spreading diphtheria. Probably it was largely due to this circumstance that at first the invaded houses were confined to a single quarter of the town—the east ward, which contains most of the cottage property and smaller streets of the place and is mainly served by the two schools in question.

Other points bearing upon the localisation of the epidemic to the particular quarter of the town were that, owing to relaying of faulty drains and similar works, there was in the east ward during the epidemic a general disturbance of foul soil in the neighbourhood of dwellings and that in the east ward rabbits and fowls are kept in large numbers in backyards. Sickness and death were in several instances reported to have occurred among these animals, but the inspector was unable to make investigations into the nature of this illness.

Dr. Buchanan endeavours in his report to give as much credit as can be thought due to the town council of Tunbridge Wells for recent sanitary improvements. It would seem, however, that they have been endeavouring, with much haste, to make up for a great deal of past neglect. The drainage of some of the older houses of the place is defective in better-class houses as well as in cottages. Sewers are often leaky. Overcrowding of persons in dwellings is common, but building of new artisans' dwellings under the Housing of the Working Classes Act is now proposed in the hope of remedying this state of affairs. Water-closets in the borough are as often as not without flushing apparatus and improvements are needed in slaughter-houses. On the other hand, the water-supply of the place—at any rate so much of it as is derived from deep wells in the Ashdown Sand—is satisfactory and the town council have been active in such useful works as providing public parks and baths.

The measures adopted for dealing with infectious disease were in some ways hardly adequate. In the case of diphtheria outbreaks it seems unwise to rely for proper measures of prevention principally on the result of routine visits to invaded houses of an inspector of nuisances however capable. No doubt difficulties are met with by a medical officer of health who is also in private practice when he wishes to make inquiries concerning patients who are being attended by other members of the profession. As hinted in the report these difficulties may have been exceptionally great in the case of Tunbridge Wells, but they can hardly be insurmountable. In view of the overcrowding which is common in the town and of the impossibility in most instances of isolating cases at home greater use might have been made of the borough isolation hospital. During the beginning of the epidemic in February and March, when some 78 cases of diphtheria were notified, only a single case was admitted to hospital; up to the end of September only 25 out of 251 cases were admitted. Seeing that the hospital is a modern one and that there was plenty of accommodation this neglect of isolation seems indefensible.

[1] London, Eyre and Spottiswoode, East Harding-street; Edinburgh, John Menzies and Co.; Dublin, Hodges, Figgis, and Co. Price 3d.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Strand Sanitary District.—Dr. F. J. Allan gives in his current annual report an interesting account of an outbreak of diphtheria in an institution in this district, containing some 60 children at ages varying from two to 17 years. At an early stage in the outbreak a bacteriological examination of the children's throats was made and the bacilli of diphtheria were obtained from as many as 27. Subsequently only nine children out of the total of 60 had failed to exhibit signs of infection. Dr. Allan regards the outbreak as instructive in several senses. It illustrates, he tells us, the value of the bacteriological examination of the throats of those who have recently passed through an attack of diphtheria and shows the manner in which persons evincing no signs of the disease may still be potent for infection. It enforces, too, he thinks, the fallacy of those who imagine that school attendance is an unimportant influence in the spread of diphtheria because in certain instances the school teachers are unable to detect a definite case of diphtheria preceding any given outbreak. Dr. Allan has recently carried out a series of experiments on the disinfection of rooms, and he concludes (1) that fumigation of rooms after infectious disease by burning sulphur is unreliable and should be discontinued as a routine practice; and (2) that formic aldehyde used either as a gas or in the form of spray is more efficient in its action, causes no injury to decorations, &c., and the process of applying it (especially as a spray) occupies much less time than does sulphur fumigation.

St. Olave's Sanitary District.—There were, Dr. W. A. Bond reports, four cases of anthrax in Guy's Hospital last year. In one case hair was the source of infection and in the remaining three hides. All recovered. In 1897 there were eight cases with one death and in 1896 14 cases with no deaths.

Newport (Monmouthshire) Sanitary District.—The town council of this borough have taken the subject of food preservatives very much by the horns and have sent round to the grocers, milk-vendors, and other persons concerned a circular intimating that they "being of the opinion that the custom of drugging many staple articles of food with so-called preservatives is a source of danger to the health of the community, especially in the case of children, instruct the town clerk to notify milk-vendors and other dealers to the effect that no boric acid or other analogous preservatives will be allowed in milk, and the discovery on analysis of the existence of such preservatives to any appreciable extent in butter, cream, prepared meats, and other articles of food will render the vendors of such commodities liable to prosecution." Dr. Howard-Jones, the medical officer of health of the district, reports that this warning has produced a marked falling off in the use of preservatives.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending Saturday, June 24th, 6436 births and 3558 deaths were registered in 33 of the largest English towns. The annual rate of mortality in these towns, which had been 16·4 and 16·5 per 1000 in the two preceding weeks, declined again to 16 3. In London the rate was 15·5 per 1000, while it averaged 16 8 in the 32 provincial towns. The lowest death-rates in these towns were 8·2 in Croydon, 13·1 in Blackburn, 13·2 in Derby, and 13 6 in Birkenhead; the highest rates were 19·7 in Plymouth, 21·0 in Manchester, 21·9 in Liverpool, and 22·9 in Wolverhampton. The 3558 deaths in these towns included 410 which were referred to the principal zymotic diseases, against 396 and 416 in the two preceding weeks; of these, 131 resulted from measles, 90 from whooping-cough, 80 from diphtheria, 58 from diarrhœa, 32 from "fever" (principally enteric), 18 from scarlet fever, and one from small-pox. The lowest zymotic death-rates were recorded in Brighton, Plymouth, Norwich, and Nottingham, and the highest rates in Birkenhead, Liverpool, Manchester, Blackburn, and

Halifax. The greatest mortality from measles occurred in Salford, Manchester, Liverpool, and Croydon; from whooping-cough in Cardiff, Burnley, Blackburn, and Gateshead; and from "fever" in Huddersfield. The mortality from scarlet fever showed no marked excess in any of the large towns. The 80 deaths from diphtheria included 28 in London, 13 in Sheffield, seven in Leeds, five in Leicester, four in West Ham, four in Liverpool, three in Swansea, and three in Birmingham. One fatal case of small-pox was registered in Hull, but not one in any other of the 33 large towns, and only one small-pox patient was under treatment in the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on June 24th was 2367, against numbers increasing from 2161 to 2280 at the end of the five preceding weeks; 335 new cases were admitted during the week, against 260, 278, and 262 in the three preceding weeks. Influenza was certified as the primary cause of 12 deaths in London. The deaths referred to diseases of the respiratory organs in London, which had been 216 and 207 in the two preceding weeks, further declined to 190 and were 18 below the corrected average. The causes of 37, or 1·0 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Bradford, Leeds, Hull, and in 17 other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Liverpool, and Sheffield.

In 33 of the largest English towns 6421 births and 3427 deaths were registered during the week ending July 1st. The annual rate of mortality in these towns, which had been 16·5 and 16·3 per 1000 in the two preceding weeks, further declined last week to 15·7. In London the rate was 14·9 per 1000, while it averaged 16·2 in the 32 provincial towns. The lowest rates in these towns were 10·4 in Blackburn, 11·8 in West Ham, 12·7 in Birkenhead, and 12·8 in Halifax; the highest rates were 20·6 in Sheffield, 21·3 in Manchester, 21·5 in Liverpool, and 22·5 in Gateshead. The 3427 deaths included 408 which were referred to the principal zymotic diseases, against 416 and 410 in the two preceding weeks; of these, 110 resulted from measles, 80 from diarrhœa, 79 from whooping-cough, 71 from diphtheria, 35 from scarlet fever, 28 from "fever" (principally enteric), and five from small-pox. No death from any of these diseases was recorded last week in Derby; in the other towns they caused the lowest death-rates in Swansea, Birkenhead, and Huddersfield, and the highest rates in Portsmouth, Manchester, Salford, Burnley, and Hull. The greatest mortality from measles occurred in Croydon, Burnley, Manchester, and Salford; from scarlet fever in Burnley; from whooping-cough in Plymouth, Portsmouth, Cardiff, Burnley, and Gateshead; and from "fever" in Brighton. The 71 deaths from diphtheria included 25 in London, 10 in Sheffield, seven in Portsmouth, six in Birmingham, five in Leeds, four in Leicester, and three in West Ham. Five fatal cases of small-pox were registered in Hull, but not one in London or in any other of the 33 towns; and two small-pox patients were under treatment last week in the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on July 1st was 2430, against numbers increasing from 2161 to 2367 at the end of the six preceding weeks; 302 new cases were admitted during the week, against 278, 262, and 335 in the three preceding weeks. Influenza was certified as the primary cause of 12 deaths in London. The deaths referred to diseases of the respiratory organs in London, which had been 207 and 190 in the two preceding weeks, further declined last week to 159, and were 30 below the corrected average. The causes of 36, or 1·0 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Leeds, and in 20 other smaller towns. The largest proportions of uncertified deaths were registered in Birmingham, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual death-rate in the eight principal Scotch towns, which had declined in the three preceding weeks from 19·9 to 17·9 per 1000, further fell to 16·7 during the week ending June 24th, but slightly exceeded the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 12·2 in Paisley and 15·2 in Perth to 17·9 in Edinburgh and 19·6 in Greenock. The 509 deaths in these towns included 16 which were referred to measles, 14 to whooping-cough, 13 to diarrhœa, 10 to scarlet fever, eight to diphtheria, and one to "fever." In all, 62 deaths resulted from these principal zymotic diseases, against 66 and 67 in the two preceding weeks. These 62 deaths were equal to an annual rate of 2·0 per 1000, which was slightly above the mean rate due to the same diseases in the 33 large English towns. The fatal cases of measles, which had been 25 and 11 in the two preceding weeks, rose again to 16 last week, of which 13 occurred in Glasgow and two in Leith. The 14 deaths referred to whooping-cough exceeded by four the number recorded in the preceding week and included six in Leith, four in Edinburgh, and three in Glasgow. The fatal cases of scarlet fever, which had been five and eight in the two preceding weeks, rose to 10 in the week ending June 24th, of which five occurred in Glasgow and four in Greenock. The eight deaths from diphtheria corresponded with the number recorded in the preceding week, and included three in Edinburgh, two in Glasgow, and two in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had been 93 and 87 in the two preceding weeks, further declined to 74 in the week ending June 24th, and were 19 below the number in the corresponding period of last year. The causes of 21, or nearly 4 per cent. of the deaths in these eight towns were not certified.

The annual rate of mortality in the eight Scotch towns, which had declined in the four preceding weeks from 19·9 to 16·7 per 1000, rose again to 17·7 during the week ending July 1st, and exceeded by 2·0 per 1000 the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 12·0 in Aberdeen and 10·4 in Leith to 23·7 in Perth and 25·0 in Paisley. The 539 deaths in these towns included 26 which were referred to diarrhœa, 15 to measles, 10 to whooping-cough, eight to scarlet fever, four to diphtheria, and three to "fever." In all, 66 deaths resulted from these principal zymotic diseases, against 67 and 62 in the two preceding weeks. These 66 deaths were equal to an annual rate of 2·2 per 1000, which was 0·3 below the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of measles, which had been 11 and 16 in the two preceding weeks, were 15 last week, of which 11 occurred in Glasgow and two in Edinburgh. The 10 deaths referred to whooping-cough showed a decline of four from the number in the preceding week, and included four in Edinburgh, four in Dundee, and two in Paisley. The fatal cases of scarlet fever, which had increased from five to 10 in the three preceding weeks, declined again to eight last week, of which six occurred in Glasgow, where two of the four deaths from diphtheria were also recorded. Of the three fatal cases of "fever" two occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 87 and 74 in the two preceding weeks, were 77 last week and were 24 below the number in the corresponding period of last year. The causes of 33, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 25·2 and 21·5 per 1000 in the two preceding weeks, further declined to 21·3 during the week ending June 24th. During the past four weeks the death-rate in the city has averaged 22·5 per 1000, the rate during the same period being 15·8 in London and 18·7 in Edinburgh. The 143 deaths registered in Dublin during the week under notice were within one of the number in the preceding week and included six which were referred to the principal zymotic diseases, against 11 in each of the two preceding weeks; of these, three resulted from "fever," one from measles, one from scarlet fever, and one from whooping-cough, but not one either from small-pox, diphtheria, or diarrhœa. These 11 deaths were equal to an annual rate of 0·9 per 1000, the zymotic death-rate during the same period being 1·7 in both London and Edinburgh. The deaths referred to different forms of "fever," which had been four and one in the two preceding weeks, rose again to three in the week ending June 24th. The mortality from measles and from scarlet fever corresponded with that recorded in the preceding week, while that from whooping-cough showed a decline. The 143 deaths in

Dublin in the week ending June 24th included 22 of infants under one year of age, and 45 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons exceeded the numbers recorded in the preceding week. Seven inquest cases and seven deaths from violence were registered; and 60, or more than a third, of the deaths occurred in public institutions. The causes of 10, or nearly 7 per cent., of the deaths in the city were not certified.

The death-rate in Dublin, which had declined from 25·2 to 21·3 per 1000 in the three preceding weeks, rose again to 23·0 during the week ending July 1st. During the quarter ending July 1st the death-rate in the city averaged 25·5 per 1000, the rate during the same period being 16·6 in London and 17·8 in Edinburgh. The 154 deaths registered in Dublin during the week under notice showed an increase of 11 upon the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against 11 and six in the two preceding weeks; of these, five resulted from whooping-cough, three from diarrhœa, one from scarlet fever, one from diphtheria, and one from "fever," but not one either from measles or small-pox. These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 1·6 in London and 2·1 in Edinburgh. The fatal cases of whooping-cough, which had been four and one in the two preceding weeks, rose again to five last week. The mortality from scarlet fever corresponded with that recorded in the preceding week, while that from "fever" showed a decline. The 154 deaths in Dublin last week included 23 of infants under one year of age and 35 of persons aged upwards of 60 years; the deaths of infants showed a slight further increase upon recent weekly numbers, while that of elderly persons showed a decline. Three inquest cases and three deaths from violence were registered; and 51, or nearly a third, of the deaths occurred in public institutions. The causes of four, or nearly 3 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are announced:—Fleet Surgeon E. R. H. Pollard to the Royal Naval Hospital at Haulbowline; Surgeon S. Croneen to the *Lizard*; S. C. Ironside to be Surgeon and Agent at Garmouth.

ROYAL ARMY MEDICAL CORPS.

Lieutenants G. J. A. Ormsby and J. H. H. Houghton have arrived in Dublin for duty. Lieutenant M. M. Lowsley proceeds from Newcastle-on-Tyne to Alnwick for duty. Captain H. D. Mason proceeds from Norwich to Colchester as a temporary measure. Major Hickman has arrived in the Home District for duty. Lieutenant H. K. Palmer joins the Eastern District for duty. Lieutenant H. D. Packer proceeds from York to Newcastle-on-Tyne for temporary duty. Lieutenant-Colonel William E. Saunders, C.B., to be Colonel.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major James Duncan to be Surgeon-Lieutenant-Colonel. Surgeon-Captain W. K. Loveless having resigned his Volunteer appointment, ceases to belong to the Army Medical Reserve of Officers. Surgeon-Lieutenant William Richardson, 7th Volunteer Battalion the King's (Liverpool Regiment), to be Surgeon-Captain.

VOLUNTEER CORPS.

Rifle: 3rd Volunteer Battalion the Norfolk Regiment: Brigade-Surgeon-Lieutenant-Colonel S. M. Hopson resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement, vacating at the same time his appointment as Senior Medical Officer to the Norfolk Volunteer Infantry Brigade. 2nd Volunteer Battalion the Prince Albert's (Somersetshire Light Infantry): Surgeon-Major J. Meredith to be Surgeon-Lieutenant-Colonel, and to resign his commission, with permission to retain his rank and to continue to wear the uniform of the battalion on his retirement. 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment: Surgeon-Captain E. J. Hunter to be Surgeon-Major. 1st Bucks: Surgeon-Lieutenant J. Shaw to be Surgeon-Captain. 1st Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment): Brigade-Surgeon-Lieutenant-Colonel T. L. Gentles resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement, vacating at the same time his appointment as Senior Medical Officer to the North Midland Volunteer Infantry Brigade. 3rd Volunteer Battalion the Manchester Regiment: Surgeon-Major J. Duncan to be Surgeon-Lieutenant-Colonel. 1st Volunteer Battalion the Durham Light Infantry: Albert Edward Morison to be Surgeon-Lieutenant.

THE INDIAN MEDICAL SERVICE FROM A FRENCH POINT OF VIEW.

Dr. H. Gros of the French Navy has an admirable article on our Indian Medical Service in the May number of the *Archives de Médecine Navale*. After exhaustively describing the various offices, duties, and privileges connected with the department he winds up his remarks to the following effect: "It will be seen that there are great advantages attached to this institution. The officers receive pay increasing in amount with the number of years which they serve and their families receive pensions proportionate to the number of children as well as to the circumstances under which each officer met with his death. With us, it may be pleaded, there are the tobacco depôts; but is not the English regulation which foresees and provides for everything at once more equitable and nobler than ours? Does it not save the widows from humiliation? Considered as a sanitary organisation the service confers on India the advantage of a corps of permanent officers who know the country well—its language, its customs, and its pathology. They are seldom moved about, a privilege which saves the State some money and also tends to preserve the health of the officers concerned, for it is chiefly during the early years of their service abroad that they are most liable to the attacks of disease and death. If in our colonies a comparison were to be made between the people whose occupations demand from them a lengthened residence at one spot, such as missionaries, merchants, and certain local functionaries, and the officers who are incessantly on the move, it would very soon be found that among the first-mentioned the death-rate and sick-rate were both the lowest. Another admirable feature in the Indian Medical Service consists in its centralisation in India. In this way the administrative officers, who are better qualified to gauge local requirements than functionaries living in London could be, are led to develop more initiative; and, moreover, the system entails the same dangers and hardships upon the chiefs as upon the subordinates. But alongside these advantages the institution would seem to have a few disadvantages. Owing to the existence of civilian medical officials private practitioners who might wish to establish themselves in India are discouraged from seeking to do so. The greatest objection, however, to the present organisation lies in the rivalry between the two medical services, a rivalry that cannot but prove detrimental to the efficiency of both. Proof of this is to be found in a discourse lately delivered at Netley by Sir Joseph Fayrer. The speaker invited his hearers to remember their common origin and to live together in amity. There would be no need to preach concord if it already existed. ..... What in a few years' time will be the utility of an Indian Medical Service when the civilian practitioners, who as it is are overcrowding Australia, New Zealand, and the Cape, shall be constrained to turn their eyes towards India and when the natives, who are beginning to take an interest in medical science, shall proceed in greater numbers to England and Germany for the purpose of qualifying themselves? It will assuredly be very trifling and perhaps the Indian Medical Service after having, it must be admitted, done good service is doomed to annihilation." Dr. H. Gros is labouring under a misconception in what he says about the rivalry between the two medical services; there is no such rivalry as that of which he speaks and any which has an existence, so far from being detrimental, is rather of the nature of a healthy stimulus which, we should say, is favourable to the efficiency of both services. The following note to a paragraph in which Dr. Gros enumerates the multifarious duties fulfilled in India by medical officers will be read with interest: "The British Agent at Chitral in 1895 was a member of the Indian Medical Service—Surgeon-Major Robertson. It was he who directed the siege of this locality (*sic*). The sympathetic notices devoted to this officer in the

English medical journals should be read and compared with the sober mention in French medical publications of the brilliant actions of officers belonging to the *Corps de Santé* of the army and navy. England knows how to honour her men, and herein perhaps consists her art of securing good service. It is perhaps the secret of her strength."

American Experience in Modern Military Surgery.

The Medical Society of the District of Columbia and the Anthropological Society of Washington recently held a meeting at Washington at which the question of modern warfare in connexion with gunshot wounds was considered and largely discussed, with special reference to the observations and experience acquired by army surgeons during the late Spanish-American War. Dr. Kober of Washington gave a brief history of the arms employed and of the conclusions reached by experimental investigators prior to 1898. Major L. A. La Garde of the Medical Service of the United States, Captain W. C. Borden who was on duty at the army hospital at Key West, Captain E. L. Munson who had general surgical experience at Santiago both on shore and in floating hospitals, and Dr. Gray of the Army Medical Museum took part in the series of lectures and discussions. These were illustrated by representations of the various surgical lesions and other conditions disclosed by the Roentgen rays and of the work and hospital equipment of the hospital ships and military hospitals in Cuba and the Philippines. A considerable number of conclusions were formulated on the occasion as the result of the practical experience which had been gained, a summary of which has been given in the *United Service Gazette*. We may refer to the following points: The "explosive effect" of projectiles was found to be extremely rare in modern warfare; the wounds by small calibre bullets are accompanied by slight shock; primary hæmorrhage is extremely rare; compound fractures and extensive comminution of long bones proportionately small; immobilisation without operation in lesions of joints of no great severity usually did well; laparotomy in the field, except in rare instances, is not justifiable; over 96 per cent. of the 1581 wounded required only slight operative treatment, major operations being seldom required; modern bullets of hard exterior and small calibre, as compared with the old lead bullet, are more humane; and antisepsis, even more than the less deadly missile, has alleviated the horrors of warfare. Speaking generally the mortality among such of the wounded as reached a hospital mainly depended upon the facility or not with which the principles of antisepsis could be applied to the wound and its vicinity.

Camp Thomas.

In a reprint from the *Medical Record* of New York Dr. J. Herbert Claiborne, jun., late Captain (in the Line), Twelfth Regiment Infantry, New York Volunteers, states in an interesting manner his experience as an officer at Camp Thomas "during the three months of the past summer when the arrow flew by night and the destruction wasted at noonday." He comes to the conclusion that the following causes were factors in the illhealth and demoralisation in the camp:—1. Undue haste in bringing the regiments into the park. 2. Unpreparedness of the regiments in uniform and equipage. 3. Choice of poor locations. 4. Dearth of good water for drinking, cooking, and bathing purposes. 5. The prevalence of great quantities of flies, which carried contagion from the latrines to the food—the most potent cause of all. 6. The crowding of regiments in too close proximity to one another. 7. The shallowness of the sinks owing to the character of the soil. 8. The sudden change of climatic conditions, different from those to which the regiments as a whole were accustomed. 9. The change of manner of life from in-door to open air. 10. The natural ignorance of the laws of health on the part of officers and men. 11. Excessive drilling under the Southern sun. 12. Ennui due to over-drilling and the lack of excitement. 13. Home-sickness. 14. Insufficiency of medical supplies—the least important cause. 15. Keeping of the camps too long on one site. 16. Total inefficiency of the division-hospital system as conducted in the park.

Recruits' Teeth.

In a recent issue[1] we drew attention to the serious loss sustained by the State through the rejection of promising recruits on account of bad teeth and suggested the appointment of dentists at all large stations, abroad as well as at home, whose services would be available not only for recruiting purposes but also for the rank and file of the army generally. It is with considerable satisfaction, therefore, that we reproduce the following announcement from the *Daily Mail*: "In consequence of many army recruits, otherwise eligible, having hitherto been rejected on medical examination through the loss or decay of teeth, and in order that some of these men may be secured for the service, the War Office has decided as a temporary and experimental measure that in the London and Manchester recruiting districts—the two most productive in the country—the examining medical officers shall be empowered to obtain the special advice of a dentist when thought desirable." It is true that, as reported, the concession is sadly hampered by limitations, but after all when a reform is intrinsically sound the great thing is to secure an initiation, however partial.

[1] THE LANCET, May 20th, 1899, p. 1390.

Honorary Surgeon to the Queen.

Surgeon-General Colvin Smith, M.D. Aberd., C.B., has been selected for the appointment of Honorary Surgeon to the Queen in place of the late Surgeon-General W. C. Maclean, C.B. Surgeon-General Colvin Smith belonged to the Indian Medical Staff, and during his long service he took part in the Burmese War of 1852–53, the Indian Mutiny, 1858–59, and in the Egyptian Expedition, 1882. For these campaigns he has had several honours bestowed on him, including three medals (each with a clasp), the Khedive's bronze star, the C.B., and the Third Class of the Order of the Osmanieh.

Deaths in the Services.

The death is announced of Sir Alexander Armstrong, K.C.B., M.D. Edin., F.R.S., Honorary Physician to the Queen. He served for five years continuously in the Arctic regions, was frequently mentioned in despatches, and served in the Baltic during the Russian War, where he was present at the bombardment of Sveaborg. For his services in night attacks with a flotilla of rocket boats he was promoted (Arctic, Baltic, and Sir Gilbert Blane's Gold Medal). He was a justice of the peace for Middlesex and the author of a "Personal Narrative of the Discovery of the North-West Passage" and "Report on the Use of Lime Juice in Scurvy." As Medical Director-General of the Royal Navy he served from November 1866, to December, 1871.

Surgeon-General Taylor, C.B.

The newly appointed Surgeon-General of Her Majesty's Forces in India has left Simla on an extensive tour of inspection of military barracks and hospitals.

Correspondence.

"Audi alteram partem."

"THE SUPERFICIAL TREATMENT OF DEEP DISEASES."

To the Editors of THE LANCET.

SIRS,—A letter from Dr. Alexander Robertson in THE LANCET of July 1st calls for notice from me if only to correct an erroneous impression which it conveys I am sure unintentionally. I nowhere asserted, and never thought, that there was "no connexion between the skin as a whole and internal organs." The contrary must be evident to the most limited experience. Inflammation of the lungs, kidneys, liver, &c., are well known to result from exposure of the surface to cold; were it not so many would now be walking upon the earth who are resting under it. I need not discuss the process by which these morbid results are brought about. It is probable that arrest of cutaneous secretion has something to do with it, but I need not dwell upon a point on which I am glad not to discern any difference of opinion between Dr. Robertson and myself.

The difference appears to narrow itself into the empirical use of counter-irritation; applying irritants to the skin overlying a diseased organ irrespective of anatomical considerations; to the chest over a tuberculous apex, to the epigastrium over a gastric ulcer, to the chest over a region of pneumonia or bronchitis, to the nape of the neck whenever the brain

went wrong no matter how. I regarded these practices as unreasonable and do so still. It has been shown that certain cutaneous regions become tender when certain deep organs are diseased. The superficial tenderness is reflected usually by way of the spinal cord. It is not necessarily immediately over the suffering organ but often a long way from it. To take some examples from Dr. Head's valuable papers tenderness under the breast has been associated with uterine irritation, tenderness over the scapula with irritation of the breast, tenderness over the lumbar vertebræ with orchitis, and tenderness of the leg and foot as well as of other parts with prostatic disease. No doubt we could abolish the superficial tenderness by curing the organ in which it has originated, but we have no assurance or even probability that the converse would hold, that we should benefit the deep disease by aiming at its remote results. Pain in the testicle may be produced by stone in the kidney, can we do good to the kidney by applying remedies to the testicle? Pain in the knee may be caused by disease of the hip, can we do good to the hip by applying remedies to the knee? It does not seem very promising thus to operate on the branch when we should strike at the root, but if any such system of therapeutics should ever receive scientific warrant, which I very much doubt, we should require a map of the body showing what tracts of skin were in relation to what organs. It would not satisfy the therapeutist of the future to clap a blister or what not on the nearest skin regardless of the course of nerves and vessels. I distrust the whole theory of counter-irritation; still more do I distrust the empirical employment of it in modes of which I have given examples.

I am, Sirs, yours faithfully,

July 4th, 1899. W. HOWSHIP DICKINSON.

EQUALITY OF REGISTERED PRACTITIONERS BEFORE THE LAW.

To the Editors of THE LANCET.

SIRS,—Your leading article in THE LANCET of June 24th on the Hunter case contains matter which merits the closest attention. Every member who has the welfare of his profession at heart will emphatically endorse your opinion that "the sooner law and the interpretation of the law are brought to recognise this equality before the law of all registered medical practitioners the better." The harm done even by the improper use of a medical title by a registered practitioner is not one tithe of that caused by dragging such petty questions before our criminal courts. If all registered practitioners are equal in the eyes of the law the policy of prosecuting a lawful practitioner for the use of a foreign degree is quite as much open to question as the late procedure of the General Medical Council for which that body has been universally condemned. That a registered practitioner with the medical degree of Paris, Berlin, or Brussels ought to be haled before a magistrate and fined £5 for calling himself "M.D." is a proposition so startling that I think few would be found to defend it; and fewer still who are acquainted with medical history and the causes which led to the passing of the Medical Act of 1858 will venture to suggest that the drafters of that enactment ever contemplated that Section 40 was likely to be extended to such cases.

It is true that up to 1886 the matter was a little more complicated. Before then all registered practitioners were *not* on an equality and it might have been argued with greater cogency that in order to regulate lawful practice it might at times be necessary to penalise the conduct of a registered practitioner who falsely held himself out to the public as qualified to practise beyond the scope of his registration. But plainly the *practising* is the essential point and no conceivable good can be compassed by penalising merely academic transgressions. The Hunter case clearly shows the evil tendency of the confusion between the offence of using an improper title where illegal medical practice is involved and where nothing of the kind is threatened. It is fortunate in some respects that the Council took up an issue the evil of which was patent to all. Had the issue been the one which, according to Mr. Carter, the Council wished to try the principle would have been not one whit better. No good can be gained by penalising registered medical practitioners on academic grounds. It may, no doubt, often be highly immoral for a registered practitioner to falsely claim academic distinction, but that it is impossible to make men moral by Act of Parliament is a trite saying; such imposture ought to be put down by the profession without recourse to the policeman, for nothing is more ridiculous than to attempt to protect honorary distinctions by penal enactments.

With reference to another portion of the subject it is difficult to understand Mr. Victor Horsley's denial of the accuracy of your statement *re* the Hunter case. No one supposes for a moment that he personally would ever have abetted such a prosecution, but it is trifling with facts to contend that the General Medical Council collectively is not responsible for it. *Qui facit per alium facit per se*, and it is idle to say that a corporate body which can only act through agents can rid itself of responsibility by denying their authority after ratification. If the fault really does lie at the door of the legal advisers and the Penal Cases Committee the Council is responsible for their selection and Mr. Victor Horsley's letter does but show how the blunder was perpetrated.

I am, Sirs, yours faithfully,

Hackney-road, N.E., July 4th, 1899. MAJOR GREENWOOD.

"SEWER VENTILATORS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of June 17th I notice an annotation headed as above and describing the utility of porous ware as a means of purifying the gases given off from sewage matter. I am glad to support the statement from practical experiment. A short time ago you were kind enough to bring under the notice of your readers a coffin lined with a cement composition which has the power of absorbing and purifying all products of decomposition and rendering the gases evolved quite inert.

Since that time I have experimented with a hollow ball of the same material filled with sewage matter and hermetically sealed. No smell could be detected at any time; neither was the pressure of the gases produced by the decomposition of the sewage matter sufficient to burst the container, although the composition was of very moderate thickness. After a few months on bursting the ball the contents were quite free from smell, very considerably reduced in bulk, and the fluid part of the sewage matter had disappeared, and I am quite convinced that if sewage pipes could be made (and I cannot see much difficulty in the way) of this absorbent material a great deal would be achieved in preventing the air we breathe from becoming offensive due to those emanations which are the result of putrefactive changes arising chiefly from chemical alterations in sewage matter.

I am, Sirs, yours faithfully,

Newport, July 1st. C. S. BOWKER.

CURATIVE SERUM IN PLAGUE.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 27th there is a communication entitled "Notes on India" from your Special Correspondent in which some sweeping and altogether unwarranted assertions are made as regards the value of Professor Lustig's curative serum in plague and which I beg to be allowed to contradict. Your correspondent is located at Calcutta and he has had no opportunity of personally verifying the statements he makes, being guided entirely from such stray notes as may happen to appear in lay papers, nor has he had any personal experience of the utility or otherwise of the serum. To simply condemn a thing without being familiar with it or knowing the various factors involved in it is scarcely fair or scientific, and to state that the figures are misleading because the cases were practically selected ones is no less misleading to your readers. Your correspondent can scarcely know that recently 26 per cent. of the patients treated with the serum die after receiving one or two injections, so that if they were such selected cases as were sure to recover the serum must have killed them. Nothing could be more absurd than this. If such were not really acute cases I should like to know what to call them. It is no use injecting moribund patients, for it is a well-known fact in sero-therapy that all serums are useless after a certain stage of disease has been reached and when the heart is failing. Nothing short of a miracle would or could influence such cases and to inject them with the serum would be to simply waste it.

From my experience, extending over three plague epidemics during the course of which I have had opportunities of observing nearly 5000 cases of plague, I must unhesitatingly say that if there is any line of treatment that is likely to reduce the high mortality from plague it is that by Professor Lustig's serum. Where the serum does not avert death it ameliorates the symptoms and most certainly prolongs the life of the patient. No serum treatment in India can show such brilliant results as those of diphtheria antitoxin in Europe and America, because of the difference in the nature of the two diseases and because it is the rule to treat cases early in diphtheria whereas it is the exception in cases of plague. We rarely receive patients earlier than at the third or fourth day of the disease and as this is the period of the greatest fatality in plague it becomes self-evident under what circumstances the serum is tried. So far, however, the results are encouraging, for it is not claimed that the serum which is now prepared is the best or strongest or that it could not be improved upon.

How differently the serum acts in cases taken early is shown by the fact that amongst cases treated by private practitioners in Bombay the mortality rate was only 40·90 per cent., and these comprised cases without any attempt at "selection." If therefore the serum is valueless this low mortality must have been due to some other cause and certainly not to serum! Would your Special Correspondent enlighten me as to what it was due to, for the serum, he alleges, has a tendency to increase the mortality and not to lower it?

The serum treatment has long since passed the experimental stage, and I am of opinion that if the mortality could be reduced by even 10 to 15 per cent. in the class of cases admitted into our public plague hospitals the results should be considered satisfactory. Better results could only be hoped for in patients taken in hand early—say within from 24 to 48 hours of the beginning of the symptoms.

I am, Sirs, yours faithfully,

N. H. CHOKSY.

Arthur-road Hospital, Bombay, June 17th, 1899.

*** Dr. Choksy is wrong in thinking that our correspondent is ignorant of things which have occurred in Bombay, because he happens to have written the particular communication from Calcutta.—ED. L.

"THE SMOKE NUISANCE."

To the Editors of THE LANCET.

SIRS,—In an annotation on the above subject in THE LANCET of July 1st, p. 39, you say: "It is odd that public opinion has only recently awakened in this matter and we may include ourselves amongst those who initiated this very desirable crusade." This is perfectly true and your columns for years have shown that the smoke nuisance is a serious one and injurious to public health and that the Public Health Act enables authorities to deal with the nuisance. It is regrettable, however, that so little is done by public health authorities who have the carrying out of this Act, especially as it has been pointed out many times that the nuisance is one which it is possible to abate. Practically, however, very little is done in the country. In a few places where private individuals have taken up the matter and prosecuted something has been done, such as in Chadderton near Oldham, Middleton, and Bolton, and in some places where smoke abatement leagues have been formed. Some large cities and towns, like Manchester, Liverpool, Oldham, Bolton, &c., take action and are doing something to stop this nuisance, but many towns are simply satisfied with fixing a limit and having reports sent in from their inspectors, whilst many others have done nothing at all. Well, I would ask what is the use of one local sanitary authority using its best endeavours to carry out the law of the land and an adjoining one simply looking on and doing nothing—nay, saying "they wish they could see more black smoke"?

The smoke nuisance will never be fairly tackled till some independent body takes the matter up. Why could not the Home Office have power to appoint inspectors just as we have inspectors under the Alkali Acts and Factory Acts? Or county councils might be empowered to appoint inspectors for each administrative county, these inspectors being allowed to take action when they find the nuisance exists. Then and not till then, shall we have any satisfactory abatement of the smoke nuisance.

I am, Sirs, yours faithfully,

WM. BERRY,
Medical Officer of Health of Wigan.

Wigan, July 1st, 1899.

"REGISTRATION OF COLONIAL DEGREES."

To the Editors of THE LANCET.

SIRS,—On April 29th you were kind enough to publish a letter from me stating that the General Medical Council, acting on the advice of Mr. Muir Mackenzie, had passed a resolution confirming the action of the Registrar in refusing to register the diploma of F.R.C.S. Irel. as an additional qualification on the Colonial List and I stated then that I had appealed to the Privy Council on behalf of the applicant. The appeal, I am glad to say, has been successful and I have just received a communication from the Privy Council Office informing me, by direction of the Lord President of the Council, that the General Medical Council have intimated to his Grace that on June 6th they resolved to accede to the application and have directed the Registrar in future to register additional or higher qualifications on the Colonial List.

I have not yet received any intimation from the Registrar of the General Medical Council, but I see in the report of the proceedings that Mr. Muir Mackenzie stated that his first opinion was given without a full knowledge of the facts before him. In my appeal to the Privy Council I did not in any way add to the application made to the General Medical Council, which, I take it, should have been submitted to Mr. Muir Mackenzie when his opinion was asked, as refusal to register a qualification might and probably has inflicted injury on an applicant legally entitled to registration. Thanking you and the members of the General Medical Council who assisted in effecting this registration,

I am, Sirs, yours faithfully,

CHARLES FREDERICK KNIGHT, M.D. R.U.I.

Edinburgh, June 29th, 1899.

"THE ROYAL ARMY MEDICAL CORPS MANUAL."

To the Editors of THE LANCET.

SIRS,—The reasons why credit is claimed by the staff of the Volunteer Ambulance School of Instruction for the new method of placing wounded on stretchers are that this method was submitted by me on behalf of the school through the usual channel in July of last year. It was tested later by army medical officers, adopted after a minor alteration, and now appears in the new manual.

I am, Sirs, yours faithfully,

REGINALD SLEMAN,
Surgeon-Captain Army Medical Reserve, Instructor Volunteer Ambulance School of Instruction.

Portman-street, W., June 30th, 1899.

A CHANCE WHICH MAY NOT RECUR.

To the Editors of THE LANCET.

SIRS,—Notwithstanding the vast extent of the British colonial empire and the varied nature of the climates embraced by it no portion of that great dominion which possesses a climate suitable for invalids is readily accessible at the present rate of ocean travel. What an inestimable boon would it not be to thousands were the British Government able to secure even a few square miles of territory favoured with an equable temperature and brilliant sunshine within five or six days' sail of Plymouth and to which patients could resort without feeling that they were expatriated.

If Spain be willing, as is rumoured, to part with one or other of the Canary Islands an opportunity presents itself which if lost may never recur. Not to mention Teneriffe or Palma, acquisition of one even of the smaller islands as a sanatorium would be of the greatest advantage to the people of the British Islands, and not without importance as a coaling station for steam vessels navigating the South Atlantic and Indian Oceans.

The prospect of an escape on easy terms from the humidity and gloom of our long winter months, and a springtime accentuated by the biting and deadly east wind,

would inspire the phthisical, rheumatic, or nephritic invalid with renewed courage. The day-long bath of bright sunshine is an agent not less potent in re-establishing mental vigour than bodily health—especially with neurotic cases—and the open-air life so important in cases of phthisis—a mode of life impossible in our changeable climate: the very idea is chimerical—is possible nearly all the year round in the sheltered valleys of these beautiful islands. I cannot think without emotion of my last look at the houses of the Latin race glowing with colour in the morning sun and reflecting their tints in the sapphire sea. It was more like a beatific vision than a reality.

If there is the least chance of the British Government acquiring one of these islands—so precious from the health point of view—assuredly the leading members of the medical profession in this country should lose no time in urging prompt action on the part of the ruling authorities.

I am, Sirs, yours faithfully,

GEORGE BARRACLOUGH, M.R.C.S. Eng.

Dublin, June 27th, 1899.

THE THIRTEENTH INTERNATIONAL MEDICAL CONGRESS, PARIS, AUGUST 2ND TO 9TH, 1900.

(BY OUR SPECIAL COMMISSIONER.)

THE RULES AND FULL PROGRAMME OF THE SECTIONS.

IN describing the organisation of the next, that is to say, the Thirteenth International Medical Congress, the full details of the reports expected, the names of the reporters, of the presidents, secretaries, &c., of sections could not be given.[1] These details have now, however, come to hand; and as all communications concerning the Congress should be made as soon as possible it is necessary that they should be published at once. The Bureau of the Congress consists of the president, Dr. Lannelongue, 3, rue François 1er, Paris; the general secretary, Dr. Chauffard, 21, rue Saint Guillaume, Paris; and the general treasurer, Dr. Duflocq, 64, rue Miromesnil, Paris. The Executive Committee consists of the above three officials, two assistant secretaries (Dr. de Massary and Dr. Léon Weber), and the following 11 committee men—namely, Dr. Bouchard, Dr. Bouilly, Dr. Brouardel, Dr. Dieu, Dr. Gariel, Dr. Le Dentu, Dr. Malassez, Dr. Nocard, Dr. Raymond, Dr. Rendu, and Dr. Roux. The address of the bureau of the Congress is 21, rue de l'École de Médecine, Paris. Then there is a General Commission consisting of 131 Parisian and provincial medical men. The rules of the Congress are as follow:—

Article 1: The Thirteenth International Medical Congress will be opened in Paris on August 2nd, 1900, and closed on the 9th of the same month. Its purpose is exclusively scientific.

Article 2: Shall be admitted as members of the Congress: firstly, doctors of medicine who apply for admission; secondly, men of science who shall be introduced by the French Executive Committee or by foreign national committees.

Article 3: All members of the Congress will receive an admission card after they have paid to the general treasurer of the Congress the sum of 25 francs (£1). Foreign committees may enrol members of their own nationality. They will transmit the subscriptions to the General French Secretary who will at once send them a number of admission cards equal to that of the subscriptions received.

Article 4: In sending their subscriptions to the treasurer the members of the Congress should indicate legibly their names, qualifications, and addresses and add their visiting cards.

Article 5: Apart from other advantages each member of the Congress will be entitled to receive a summary of all the labours of the Congress and the printed works issued by the section to which he belongs. (For these volumes members should apply to M. Masson, publisher of the works of the Congress, 120, Boulevard Saint Germain, Paris.)

Article 6 enumerates the 23 sections of the Congress.

Article 7: The Executive Committee and a General Commission of Organisation are entrusted with the duty of preparing the work of the Congress.

[1] THE LANCET, May 27th, 1899.

Article 8: The Congress will sit every day either in general assemblies or in meetings of sections.

Article 9: Two general assemblies will take place, one on the day of the opening of the Congress, the other on one of the subsequent days.

Article 10: On the day of the first general assembly the Congress will appoint honorary presidents.

Article 11: The general assemblies will be devoted to the delivery of the customary speeches and to the regular votes which have to be recorded. Only such persons as have been designated and invited by the organising Executive Committee will be able to speak at the general assemblies.

Article 12: All propositions relating to the labours of the Congress must be notified to the Executive Committee before May 1st, 1900. The committee will then decide what course to follow in regard to these proposals.

Article 13: The committee of each section will organise its own programme (the reading of reports, the discussion of the subjects introduced, and the miscellaneous communications).

Article 14: The speeches delivered at the general assemblies and the reports made in the sections will be published in the account given of the labours of the Congress. With regard to the miscellaneous communications and discussions the Executive Committee reserves the right of examining the same. The time allowed for each communication must not exceed 15 minutes and the speakers taking part in the discussions must limit their speeches to five minutes.

Article 15: The written text of the reports, communications, and speeches must be handed over to the secretaries of each section on the day on which they are read or delivered.

Article 16: The French language is the official language of the Congress for all the international relations. In the general assemblies, as also in the meetings of the sections, the German, English, and French languages may be employed.

Article 17: All the questions relating to the scientific work of the sections should be submitted to and communicated to the president of the section concerned. For all that relates to the organisation and functions of the Congress communications should be made to the general secretary of the Congress.

Article 18: At the second general assembly of the Congress the place of meeting for the following Congress shall be designated and the bureau of that Congress elected.

Such are the rules of the Congress translated from the French, for the English edition has not yet been issued.

A list of the presidents and secretaries of 31 foreign committees is published. These comprise 26 different nationalities, some nations having more than one committee. Thus for the Austrian Empire there are Austrian, Czech, Hungarian, and Polish committees, and for the British Empire there is for Great Britain and Ireland a committee with Sir William Mac Cormac as president, and Dr. A. E. Garrod, Medical Registrar of St. Bartholomew's Hospital, London; Dr. Keser, Physician to the French Hospital, London; and Mr. D'Arcy Power, assistant surgeon at St. Bartholomew's Hospital, London, as secretaries. For Australia, Dr. Crevelli of Melbourne is president, and for Canada Dr. Beausoleil of Montreal is president. The president for the United States of America is Professor Osler of Baltimore. The other nationalities which have national committees are Germany (Professor Virchow of Berlin, president), the Argentine Republic, Belgium, Brazil, Bulgaria, Denmark, Spain, Greece, Italy, Japan, Luxemburg, Mexico, Holland, Peru, Portugal, Roumania, Russia, Servia, Sweden, Norway, Switzerland, Turkey, and Egypt. These nations, it will be observed, are for the most part placed in alphabetical order (according to the French language).

Practically speaking, the sections constitute in themselves so many separate congresses, for they possess a very large measure of autonomy in regard to their internal affairs. The sections are grouped together under five separate classifications and the first of these is devoted to Biological Sciences. Its president is Dr. Milne-Edwards of Paris. The First Section, which is a subdivision of this class, relates to Comparative Anatomy. Its secretary is M. Auguste Pettit, 60, rue Saint André des Arts, Paris. The reports are by Armand Vire of Paris on the Modifications of the Organs of the Senses Produced by Obscurity; Dubois of Leyde on Pithecanthropus; Hubrecht of Leyde on the Development of Some Lemurians; Ledouble of Tours on Muscular Anomalies; and Van Beneden of Liège on Notomyelitis.

Descriptive Anatomy is the second subject to be treated in this sub-section and the secretary for this question is M. Rieffel, 7, rue de l'École de Médecine, Paris. The reporters are: Waldeyer of Berlin on the Topography of the Brain; Debierre of Lille on the Centres of Projection and Association in the Brain; Van Gehuchten and Romiti of Pisa on Some Structural Relations of the Genital Organs; Salvi of Pisa on Structural Relations of the Arteries of the Limbs; and Valenti of Bologna and Auguste Pettit of Paris on the Suprarenal Glands.

The Second Section of the Congress is devoted to Histology and Embryology. The president is Dr. Mathias Duval and the secretaries are Dr. Retterer and Dr. Loisel, 15, rue de l'École de Médecine, Paris. The reporters have not yet been appointed but it is proposed to discuss: (1) General Anatomy in Relation to the Microscope and the Spectroscope; (2) Functional Differentiations in the Protoplasm; (3) the Origin and Evolution of the Leucocytes in the Animal Series; (4) New Conceptions of the Histology of the Nervous System; and (5) Chromatolysis. This section will be able to arrange rooms and microscopes for demonstrations.

The Third Section is on Physiology, Physical and Chemical Biology. Dr. Chauveau is the president and the general secretary is Dr. Dastreal, the Sorbonne, Paris. This section does not propose to discuss reports; the sitting will be devoted to experimental demonstrations and to communications which bear upon physiology.

The Fourth Section is devoted to Medical Sciences. Professor Bouchard is its president and Dr. Charrin, 11, Avenue de l'Opéra, and Dr. Roger, 4, rue Perrault, Paris, are its secretaries, and the committee is exceptionally numerous. It is proposed to discuss first the State of the Organism and its Modifications in Relation to Infection and Natural or Acquired Immunity. This subject comprises: 1. The modification in the tissues produced by infectious diseases, the therapeutic employment of blood serums, &c. 2. The causes of immunity in normal organisms. 3. The origin of leucocytes. 4. The organs and toxins which destroy microbes. 5. The action of toxins on the nervous system. 6. Nervous conditions in relation to infectious diseases. 7. The pathology of tetanus. Then there will be a general discussion on Fevers, on Heredity, on Diabetes, on Extra-Buccal Alimentation, on the Employment of the Roentgen Rays in Medicine, and on Auto-intoxications.

The Fifth Section is on Bacteriology. Dr. Duclaux is the president and Dr. R. Blanchard, 226, Boulevard Saint Germain, Paris, is the secretary. Professor Behring will present a report on Tuberculosis; Büchner of Munich and Metchnikoff of Paris on Immunity; Roux of Paris and Ehrlich of Berlin on Toxins and Antitoxins; Laveran of Paris, Grassi of Rome, and Danilevsky of Kharkow on Paludism; and Borrel of Paris on the Parasites of Cancer.

The Sixth Section deals with Pathological Anatomy. Its president is Professor Cornil and its secretary is Dr. Letulle, 7, rue de Magdeburg, Paris. Hlava of Prague, Fabre-Domergue of Paris, and Podwissotsky of Kiew will report on Cancer. Baumgarten of Tübingen, René Marie of Paris, Ziegler of Friburg-en-Brisgau and Carnot of Paris will report on Experimental Repair of the Tissues. Weigert of Frankfort, Marinesco of Bucharest, and Philippe of Paris will report on the Influence of Neuralgia in the Evolution of Inflammations and of Tumours. Ehrlich of Berlin and Jolly of Paris will report on the White Corpuscles in the Blood during various morbid conditions. Hamburger of Utrecht, Vagnez of Paris, and Hedin of Lund, Sweden, will report on the Resistance of the Red Corpuscles in Normal and Pathological Conditions.

The Seventh Section is devoted to Internal Pathology. The secretaries are Dr. Rendu, 28, rue de l'Université, and Dr. F. Widal, 155, Boulevard Haussmann, Paris. The first report will be by Le Gendre of Paris, Ebstein of Göttingen, Sir Dyce Duckworth of London, and Kolisch of Vienna on the Pathology of Gout. Achard of Paris, Laache of Christiania, and Pavlinoff of Moscow will report on Renal Insufficiency. Mathieu of Paris, Nothnagel of Vienna, Ewald of Berlin, and Revilliod of Geneva will report on Enteritis of the Mucous Membranes. Teissier of Lyons, von Basch of Vienna, Masius of Liège, and Sirotonine of Moscow will report on Acute Œdema of the Lungs. Dieulafoy of Paris and Bozzolo of Turin will report on Gastric Ulcerations.

The Eighth Section deals with the Diseases of Children. Dr. Grancher is the president and Dr. Marfan, 30, rue La Boétie, Paris, is the secretary. The first report is on the Artificial Rearing of Infants and the Employment of Sterilised Milk. The reporters are Jacobi of New York, Johannessen of Christiania, Heubner of Berlin, Monti of Vienna, and Variot of Paris. There will be a report on Gastro-intestinal Infections and Intoxications of Infants by Epstein of Prague, Escherich of Gratz, Baginsky of Berlin, F. Fede of Naples, Martinez Vargas of Barcelona, and Marfan of Paris. This will be followed by a report on Infantile Tuberculosis by d'Espine of Geneva, Hutinel of Paris, Richardière of Paris, and Moussons of Bordeaux. A report on Acute Meningitis which is not connected with Tuberculosis will be presented by Mya of Florence, Concetti of Rome, Netter of Paris, and Rauchfuss of St. Petersburg. Apart from the subject matter of these reports the committee of this section suggests the following questions for discussion: Anti-diphtheritic Serum, Infantile Rheumatism in relation to Heart Diseases and Chorea, Alcoholism of Children, Constipation, and Diseases of the Thymus.

The Ninth is the Section on Pharmacy, Materia Medica, and Therapeutics. As already explained, this on former occasions constituted a separate congress of itself. The president is Dr. Landouzy and the secretary is Dr. Gilbert, 27, rue de Rome, Paris. On Therapeutics four reports are announced—one by Naunyn of Strasburg and Gilbert and Fournier of Paris on the Treatment of Bilious Lithiasis, and another by Baginsky of Berlin and Hayem of Paris on Indications for and against Blood-letting. Landouzy of Paris will report on the Therapeutic Employment of Saline Injections, and Stokvis of Amsterdam and Lépine of Lyons will report on the question as to whether efforts should be made to reduce fever. In regard to Pharmacy three reports are announced, but the names of the authors of the first report which deals with the advantages and disadvantages of compound medicament are not given. The second report is by Lauder Brunton of London and Grocco of Florence and discusses the Physiological and Therapeutic Action of Digitalis and its Active Principles. The third report is by Tchérinof of Moscow and Rénault of Lyons and is on the Physiological and Therapeutical Mechanism of Diuretic Medicaments. In regard to Materia Medica there will be a report comparing the therapeutic action of vegetable pharmaceutic preparations with that of their active principles. The names of the reporters on this subject are not given. Van Aubel of Liège will report on our Present Knowledge of the Active Principles of Digitalis. Thoms of Berlin will report on our Present Knowledge of the Alkaloids of the Poisonous Solanaceæ. Bourquelot of Paris will report on the Alteration of Medicaments by Oxidation.

The Tenth Section is on Diseases of the Nerves or Neurology. Dr. Raymond is the president and Dr. P. Marie, 3, rue Cambacérès, Paris, is the secretary. There are six reports announced. The first is on the Centres of Projection and Association in the Human Brain, with Flechsig of Leipsic, Hitzrig of Halle, and von Monakow of Zürich as reporters. Jendrassik of Budapest and C. S. Sherrington of Liverpool will report on the Nature and Localisation of the Reflex Action of the Tendons. Von Leyden of Berlin, Crocq of Brussels, and Marinesco of Bucharest will report on the Nature and Treatment of Acute Myelitis. Roth of Moscow and Ferrier of London will report on the Diagnosis of Organic Hemiplegia and Hysterical Hemiplegia. Bruce of Edinburgh and Hómen of Helsingfors will report on Lesions which are not due to Tabes Dorsalis. Pick of Prague and Tamburini of Reggio will report on the Different Aspects of Aphasia.

The Eleventh Section is devoted to Mental Diseases and Psychology. Dr. Magnan is the president and Dr. Ant. Ritti at l'Asile de Charenton, Seine, is the secretary. The first report, by Ziehen of Jena, Murri of Turin, and J. Voisin of Paris will deal with the Psychosis of Puberty. G. E. Shuttleworth and Fletcher Beach of London, Mierzejewski of St. Petersburg, and Bourneville of Paris will report on the Pathological Anatomy of Idiocy. Clemens Neisser of Leubus, Korsakof of Moscow, and Morel of Mons will report on Rest in Bed for the Treatment of Acute Forms of Insanity and the modifications this would entail in the organisation of asylums for the insane. Krafft-Ebing of Vienna, Morselli of Genoa, and Paul Garnier of Paris report on Obsessions and Impulses due to Sexual Perversion from the Medico-legal Point of View.

The Twelfth Section was also on former occasions a separate congress. It deals with Dermatology and Syphilitic Diseases. Dr. Besnier is the president, and Dr. G. Thibierge, 7, rue de Surène, Paris, is the secretary. In regard to Dermatology there are four reports. The first is on the Parasitical Origin of Eczema, by Kaposi of Vienna, Unna of Hamburg,

Jadassohn of Berne, J. Galloway of London, and Brocq, with the aid of Bodin of Rennes and Veillon of Paris. Boeck of Christiania, Colcott Fox of London, Campana of Rome, G. Riehl of Leipsic, and Darier of Paris will report on Tuberculous Affections of the Skin. Malcolm Morris of London, Lassar of Berlin, Mirelli of Parma, Pavloff of St. Petersburg, and Sabouraud of Paris will report on Alopecia. Behrend of Berlin, J. J. Pringle of London, and Perrin of Marseilles will report on Leucoplakia. Neisser of Breslau, D. Bulkley of New York, Ducrey of Pisa and Hallopeau of Paris will report on Syphilis and the Infections associated with this Disease. J. Hutchinson of London, Tarnowsky of St. Petersburg, Finger of Vienna, and L. Jullien of Paris will report on Hereditary Syphilis. Taylor of New York, Lesser of Berlin, Tommasoli of Palermo, J. E. Lane of London, and Balzer of Paris will report on the Causes of Blennorrhagic Infections.

Surgical Sciences are comprised in the Third Classification of the Congress, which consists of seven sections. The first of these is the Thirteenth Section of which Dr. Tillaux is the president and Dr. Walther, 21, Boulevard Haussmann, Paris, is the secretary. The section deals with General Surgery, and the reporters are Ceccherelli of Parma, Mayo Robson of Leeds, and J. Boeckel of Strasburg on the Surgery of the Pancreas; Ashurst of Philadelphia, Bergmann of Berlin, and Maunoury of Chartres on Radiography in the Study of Fractures and Luxations; Bobrof of Moscow, Bloch of Copenhagen, and Lejars of Paris on the Treatment of Infected Wounds; and Roux of Lausanne, Kraské of Friburg, and Chaput of Paris on Gastro-intestinal and Intestinal Anastomosis.

The Fourteenth Section is on Surgery as applied to Children. Dr. Lannelongue is president and Dr. A. Broca, 5, rue de l'Université, and Dr. Villemin, 58, rue Notre Dames des Champs, Paris, are the secretaries. In a report on the Treatment of Congenital Luxations of the Hip, Hoffa of Würzburg will deal with operations with the knife, Lorenz of Vienna with operations in which no blood is lost, and Kirmisson of Paris will sum up the question. On Pott's Disease, Soubotine of St. Petersburg will report on the Treatment of Gibbosity when in Course of Formation and Bradford of Boston will deal with the treatment after complete formation. F. Treves of London, Roux of Lausanne, and Jalaguier of Paris will report on the Therapeutic Indications for Appendicitis.

The Fifteenth Section comprises what formerly used to constitute a separate Congress on Urinary Diseases. Dr. Guyon is the president and Dr. Desnos, 31, rue de Rome, Paris, is the secretary. Kuster of Marburg, Christian Fenger of Chicago, and Bazy of Paris will report on Renal Operations. Saxtorph of Copenhagen, Hogge of Liège, and Pousson of Bordeaux will report on the Value of Surgical Operations in Urinary Tuberculosis. W. White of Philadelphia, Legnen of Paris, and von Frisch of Vienna will report on the After Consequences of Operations for Hypertrophy of the Prostate. Reginald Harrison of London, Mariachess of Odessa, and Albarran of Paris will report on the After Consequences of Operations for Stricture.

The Sixteenth is the Ophthalmological Section. Dr. Panas is the president and Dr. Parent, 26, Avenue de l'Opéra, Paris, is the secretary. Bellarminof of St. Petersburg, Nuel of Liège, and Uhthoff of Breslau will report on the Infectious and Toxic Origin of Optic Neuritis. Bernheimer of Vienna, Angelucci of Palermo, and Henschen of Upsal will report on the Cortical Visual Centre. Pflüger of Berne, Snellen of Utrecht, H. R. Swanzy of Dublin, and de Schweinitz of Philadelphia will report on the Comparative Value of Enucleation and of the Operations Proposed in its Stead.

The Seventeenth Section deals with Diseases of the Nose and Throat. Dr. Gouguenheim is president and Dr. Lermoyez, 20 *bis*, rue la Boétie, Paris, is the secretary. Bosworth of New York and Hajek of Vienna will report on the Pathology and Treatment of Suppurating Ethmoiditis. Jacobsen of St. Petersburg, and Masini of Genoa will report on Spasmodic Rhinitis and its Consequences. Onodi of Budapest and Heymann of Berlin will report on the Treatment of Anosmia. Sir F. Semon of London, Schmiegelow of Copenhagen, and Goris of Brussels will report on the Technique of Thyrotomy. Krause of Berlin, Capart of Brussels, and Chiari of Vienna will report on Warty Growths of the Vocal Cords. B. Fraenkal of Berlin and M. Schmidt of Frankfort-on-Main will report on the Diagnosis of Cancer of the Larynx.

The Eighteenth Section deals with Otology. Dr. Gellé is the president and Dr. Castex, 30, rue de Messine, Paris, is the secretary. Siebenmann of Basle and Botey of Barcelona will report on the Surgical Treatment of Otic Sclerosis. Dundas Grant of London and Brieger of Breslau will report on Otitic Pyorrhœa. Von Stein of Moscow, Moll of Arnheim, and Pritchard of London will report on the Causes and Treatment of the Vertigo of Ménière. Urrantschitsch of Vienna and Rohrer of Zürich will report on Acoustic Exercises for Deafness. Gradenigo of Turin will report on Toxic Labyrinthitis. Hartmann of Berlin and Schiffers of Liège will report on a Project of Unification for Acoustic Notation.

The Nineteenth Section relates to Stomatology or diseases of the mouth. Its president is Dr. Pickiewicz and its secretary is Dr Ferrier, 39, rue Boissy-d'Anglas, Paris. The reporters are not yet appointed, but the subjects for discussion proposed are Therapeutic Remedies for Anomalies in the Position and Direction of Teeth; the Influence of Diseases of the Mouth and the Teeth in Diseases of other Organs; on the Choice of Antiseptics in the Treatment of Dental Caries; and on the Treatment of Dental Pyorrhœa.

We now reach the Fourth Classification of the Congress, This comprises two sections, one of Obstetrics and the other of Gynæcology. The Twentieth Section is concerned with Obstetrics. The president is Dr. Pinard and the secretaries are Dr. A. Bar, 122, rue de la Boétie, and Dr. Champetier de Ribes, rue de l'Université, Paris. Doléris of Paris, Pestalozza of Florence, and Menge and Kroenig of Leipsic will report on the Etiology and Nature of Puerperal Infection. Ribemont-Dessaignes of Paris, F. H. Champneys of London, and Fr. Schultze of Jena will report on the Treatment of Apparent Death in the Newly Born. A third question relates to the application of the x rays to obstetrics, but the reporters are not yet appointed.

The Twenty-first Section is devoted to Gynæcology. Dr. Terrier is the president and Dr. Hartmann, 4, Place Malesherbes, Paris, is the secretary. Richelot of Paris, Dimitri de Ott of St. Petersburg, and Montgomery Baldy of Philadelphia will report on the Surgical Treatment of Cancers of the Uterus. Pozzi of Paris and Döderlein of Tübingen will report on Cervical Metritis.

The Fifth and last Classification is entitled Public Medicine. It comprises forensic medicine and such public services as the navy and army. The Twenty-second Section deals with Forensic Medicine. Its president is Professor Brouardel and its secretary is Dr. Motet, 161, rue de Charonne, Paris. Descoust and Bordas of Paris will report on Putrefaction in regard to Pulmonary Disease. Descoust of Paris will report on Putrefaction of the Eye as a Means of Ascertaining the Date of Death. Ogier of Paris will report on the Cremation of Criminals. D'Arsonval and Bordas of Paris will report on Accidental Deaths caused by Electricity. Brouardel and Pouchet of Paris will report on the Necessity of Investigations by Medical Experts in cases where accidents result from the Habitual Consumption of Drinks or Food which are preserved by means of such chemical agents as boric and salicylic acids or formalin. Castieux of Lille and Langier of Paris will report on the Valvular Lesions Resulting from Contusions of the Thorax. Thoinot and Vielle of Paris will report on the Action of the New Smokeless Powder on Clothes and the Skin. Gilles de la Tourette and Rocher of Paris will report on the Infringements of the Law resulting from the Practice of Magnetism by Persons who do not Possess a Diploma.

The Twenty-third and last Section deals with Military Surgery and Medicine. The president is Dr. Dujardin-Beaumetz and the secretary is Dr. Catteau, address to the Ministry of War, Paris. There is a sub-section on Military Surgery with Dr. Chauvel, 51 *bis*, Boulevard Latour-Maubourg, Paris, as president. Habart of Austria and Lagarde of the United States will report on the Lesions Produced by Small-bore Bullets, six millimetres being the maximum size. Demosthene of Roumania and Geissler of Germany will report on the Lesions produced by Artillery Projectiles. Bischer of Switzerland will report on the Rules for Immediate Treatment in Ambulances or Field Hospitals of Fractures produced by Firearms. This section notifies its desire that medical men who have taken an active part in the wars or colonial expeditions which have occurred within the last 10 years should give some account of their experience in the treatment of wounds, &c. Then there is another sub-section on epidemics and hygiene and Vincent of Paris will report in this sub-section on the Etiology and Prophylaxis of Typhoid Fever during Military Campaigns. Antony of Paris and Simonin of Paris will treat in the same manner the subject of Dysentery. Ferrier of Paris will report on

the Prophylaxis of Syphilis in Armies. Laparrel of Paris will report on Temporary Methods of Purifying the Water supplied to Armies. There is also a sub-section on Naval Medicine. Dr. Cunéo is the president and Dr. Langier, address to the Ministry of Marine, Paris, is the secretary. Le Dantec of Bordeaux will report on Tropical Phagedæmic Diseases. Fontan will report on the Care of the Wounded on board Ship during and after action. Burot will report on Hospital Ships for Colonial Expeditions. Finally, there is a sub-section to deal with colonial questions, in which Simon and Yersin will report on plague from the bacteriological point of view, its treatment with serum, &c. Calmette of Lille will report on the Prophylaxis of Tetanus in Hot Climates and Firket of Liège, Clarac, and Marchaux will report on the Etiology and Prophylaxis of Bilious Fever and Hæmoglobinuria.

Thus far has the programme of the Congress been drawn up. The list of subjects though fairly complete will doubtless be enlarged. In any case other subjects may still be proposed. Though Rule 17 implies that proposals to this effect should be sent to the presidents of the sections concerned, the addresses of the secretaries only are given. Presumedly, therefore, members should write to the secretaries who will, when necessary, transmit their applications to the presidents of the sections. At all events, we would urge that to secure a good hearing and place on the programme no time is to be lost. It would be lacking in proper consideration for the organisers of the Congress and the difficulties with which they are beset to wait till the last moment.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Snake Poison for the Treatment of Plague.—Native Processions to Drive away the Plague.—The Course of the Epidemic. — Experiments against Rinderpest. — Parsee Reform in the Disposal of the Dead.

PROMISE of help in the treatment of plague has appeared from a somewhat unexpected quarter in the method of inoculation with snake poison. So far as it has been tried it appears to have been followed by almost immediate improvement and some experiments which have been conducted on monkeys give further prospect of ultimate success. The poison of the cobra has been selected, and mixed with glycerine it has been administered hypodermically. A sufficient number of cases has not yet been obtained to enable me to give any comparative statistics, but I am informed that the patients who have so far been treated showed rapid and marked improvement after the injections. A tentative dose equal to about one-fiftieth of a minim was first tried, but a larger quantity up to about one-twenty-fifth of a minim was subsequently employed with more marked and satisfactory effect. It is difficult at present to see the *rationale* of the process, but it may be that the poisons of plague and of the colubrine snakes are antagonistic in their effects on the nervous system. The poison of plague would seem to kill through its action on the nervous system, paralysing the vital centres, and the poison of the cobra, possibly allied chemically to it, may yet be shown to be directly inimical to plague virus. Explanations are of course at present purely speculative, so that we await further experiments in this direction with great interest.

Although the plague epidemic in Calcutta is declining, every night for some weeks past might be seen both Mohammedan and Hindu processions parading the streets of the native portion of the town with the object of propitiating the deity so as to avert the pestilence. The purport of the Hindu demonstrations was to invoke and extol the name of the Almighty Hari (the destroyer of all demons) in every corner of the city. The processions slowly wended their way through the main thoroughfares singing or intoning prayers which are supposed to be efficacious in driving away the plague. It is supposed that last year the prayers were at once peremptorily answered and "the great shadow of plague melted away." Again in the present panic the people have chanted and praised in chorus the holy name of Hari and the immortal name is scattered throughout all Calcutta day and night "in expectation of again extirpating out the evil precursor from the precincts of this city." The processions are most orderly, partaking more of the character of a funeral march than anything else.

The plague summary for the week shows a still further decline, only 469 deaths having been recorded, against 514 for the previous week. In Bombay city the deaths fell from 82 to 62. There was a slight rise in the Belgaum district, but in Karachi the deaths fell from 22 to 16. In Calcutta there were only 22 deaths attributed to plague, while Mysore city recorded 10, the Kolar Gold Fields 11, the Madras Presidency 3, the Punjab 5, Hyderabad 4, and Mysore State 21.

Penang, the latest place visited by the plague, has been declared an infected port, and in consequence all shipping arrivals from that port to Colombo will in future be strictly quarantined. Experiments have recently been conducted by Veterinary Majors Brodie, Mills, and Raymond, and Captain Rogers, I.M.S., officiating Imperial bacteriologist, similar to those of Professor Koch in South Africa, with the object of confirming his results as to the inability of dried rinderpest matter to convey infection to living animals. The results of the investigations tend to show that there is no danger of rinderpest contagion being conveyed to other countries by means of bones and hides of animals exported to them.

I am glad to hear that there is a movement on foot amongst the Parsee community to give the members the option of burial for disposal of the dead instead of their customary method. There is, of course, considerable opposition to any change from the more conservative portion of the people, but the new movement has very powerful support and it is to be hoped that it will be successful. Exposure of the dead to become the prey of vultures is at variance with the customs of modern civilisation and the system of burial is perhaps the only alternative which would appeal to the feelings of this community. It can only be a matter for regret that the religious scruples of the people prevent them from adopting the more sanitary practice of cremation

June 15th.

ASYLUM REPORTS.

Bristol City and County Asylum (Annual Report for 1898).—In this report it is stated that additional buildings to accommodate the increasing number of patients in the county will be ready for occupation in the autumn and that this will enable the patients from the county of Bristol, now boarded at Gloucester, to be received at the asylum. The present building accommodates 770 patients and receives both private and pauper patients. There were 201 patients admitted during the year and 24 of these after being discharged were readmitted. Not only do the cases admitted show an increase in number to the extent of 25 per cent. over the admissions of previous years, but the unfavourable character of the admissions as regards recovery still continues and has become more accentuated. Phthisis is apparently not very prevalent, as only 4·3 per cent. of the deaths can be attributed to this cause, but, on the other hand, 34 per cent. of the deaths were the result of pneumonia and œdema of the lungs. When the buildings now in progress are completed the total accommodation available will be sufficient for 1000 patients, the limit which the Commissioners in Lunacy have sanctioned for buildings on the present site. It is pointed out that the increase of lunacy in this district is due to the local increase of population.

Derby Borough Asylum (Annual Report for 1898).—The asylum population numbered 320. Here, as in other institutions, it was noted that the character of a considerable proportion of the admissions was not at all favourable to recovery. The 82 admissions of the year included eight general paralytics, two epileptics, two congenital imbeciles, six cases of senility, and seven chronic cases transferred from other asylums. Thus in at least 25 cases, or 30·5 per cent. of the whole, there was from the first practically no possibility of recovery. While accumulation of chronic cases has taken place the statistics of the past 10 years show no actual increase in the ratio of insanity to the general population of the borough. The ratio of admissions per 10,000 of population was 5·91. The recovery rate was 4 per cent. lower than the average for the last 10 years. The tuberculin test is now applied to all new milch cows. The installation of electric light was the most noteworthy improvement of the year. During the past 10 years 899 patients have been admitted suffering from the following mental diseases: acute mania, 174; melancholia, 131; epileptic

insanity, 108; senile insanity, 97; general paralysis, 76; alcoholic insanity, 74; congenital feeble-mindedness, 33; and puerperal insanity, 18. Of the puerperal cases recovery was noted in 14, a ratio of 80 per cent.

Down District Asylum (Annual Report for 1898).—The asylum population was 550 and the annual admissions were 126. Of the admissions 24 were classed as incurable, a ratio of 19 per cent. Of the total number of deaths 39·6 per cent. were attributed to phthisis. Open-air treatment is now adopted for all phthisical patients, together with single rooms for them to sleep in. The erection of separate blocks or pavilions is urged for the permanent accommodation of these cases. The dairy cattle are all treated with tuberculin and the daily milk supply is sterilised before use.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following were among the principal amounts received at the Mansion House during the past week in aid of this Fund. The total now exceeds £47,000:—

	£	s.	d.
St. Jude, South Kensington	742	8	9
St. Martin-in-the-Fields	178	1	6
St. Stephen's, South Dulwich (with additions)	208	14	6
Holy Trinity, Tulse-hill	162	9	4
St. Mary, Bryanston-square	243	2	1
St. Paul, Onslow-square (with additions)	493	18	3
St. Mary Abbotts, Kensington: Parish Church, £367 17s. 8d.; St. Paul's, Vicarage Gate, £108 17s. 4d.; Christ Church, Victoria-road, £89 0s. 4d.	565	15	4
Wimbledon Churches, per Rev. Canon Haygarth	167	4	4
Essex Unitarian Church, The Mall, Kensington	119	5	9
Christ Church, Chislehurst	50	5	8
Wandsworth Parish Church and Holy Trinity	86	11	8
Stamford-hill Congregational Church	91	1	8
St. Bartholomew and St. Matthew, Sydenham	134	16	2
St. Andrew, Westminster	85	4	10
Holy Trinity, Paddington	98	6	16
Holy Trinity, St. Marylebone	84	9	9
Kensington, Allen-street, Congregational Church	65	15	1
St. John, Downshire Hill	90	17	4
St. Paul, Herne Hill	43	15	5
St. Luke, Radcliffe-square	65	0	0
"F."	50	0	0
St. James, Hatcham	66	12	3
St. Luke, Deptford	58	8	0
West Wickham Churches	36	12	8
St. Mark Presbyterian Church, Greenwich	26	10	7
St. Augustine, Honor Oak	44	7	8
Christ Church, Beckenham	42	0	8
St. John, Bromley, Kent	35	3	5
Streatham-hill Congregational Church	20	18	0
Eaton Chapel, Eaton-square	40	0	0
Wanstead Meeting	31	14	0
St. Luke, West Holloway	33	13	9
New Court Congregational Church, Tollington Park	30	12	0
High Beech Church	27	19	4
Palace Chapel Royal, Hampton-court	42	3	5
Kingston Parish Church	20	0	0
Hillingdon Parish Church and Chapel	33	12	9
St. Jude, Mildmay-park	28	7	6
Camden-road Presbyterian Church and Mission	23	2	0
St. Andrew's, Whitehall-park	31	18	7
St. Dunstan, East Acton	23	16	2
St. Michael, Stockwell	30	0	0
St. Olave, Hart-street	20	0	0
All Saints, Camberwell	23	9	3
Southend Episcopal Chapel, Catford	20	8	0
Barnes Parish Church	28	5	0
St. Paul, Greenwich	20	0	0
Holy Innocents, Hornsey	20	1	3
St. Saviour, Highbury	28	8	8
St. Paul, Harringay	25	1	10
All Souls, Langham-place	71	1	0
St. John, Notting-hill	48	11	3
All Saints, Notting-hill	31	13	6
Christ Church and St. Barnabas, Finchley	30	5	4
St. Pancras Parish Church	48	11	4
St. Barnabas, Pimlico	26	13	6
St. Cuthbert, West Hampstead	24	4	0
St. Paul, Paddington	12	19	7
St. Mary, Aldermanbury	21	16	9
Congregational Church, Wimbledon	21	11	3
Willesden Presbyterian Church and Missions	40	1	0
St. Mary, Balham	41	6	7
Windsor-road Church, German Lutheran	69	9	0
Brondesbury Baptist Church	22	11	9
St. Mary Magdalene, Munster-square	23	4	11
St. Paul, Clapham	20	1	1
Ferme Park Baptist Church	23	7	10
St. Stephen, Avenue-road	25	16	7
St. James, Garlickhithe (with additions)	27	15	4
Belgrave Presbyterian Church	26	10	7
St. John Baptist, Kensington	20	3	4
St. John Evangelist, Putney	78	5	1
Christ Church, Hampstead	65	10	1
St. Mary Magdalene, Peckham	42	7	1
Wanstead Parish Church and Christ Church	43	10	10
St. Philip, Sydenham	32	8	5
St. Mary, Spring-grove	30	0	0
St. George, Tufnel-park	44	10	6
Gray's Inn Chapel	60	0	0
St. Anselm, Pinner	28	8	10
St. Mary, Monken Hadley	32	2	1
Emmanuel Church, Wimbledon	70	1	0
Streatham Parish Church and Chapel	78	2	1
St. Paul, Canonbury	31	6	6
Emmanuel Church, West Hampstead	24	5	9
St. Andrew, Totteridge	28	0	7
Clapham Parish Church	61	10	0
St. John, Highbury Vale	22	14	9
Upper Clapton Congregational Church	20	10	10
Christ Church, Woburn-square	26	1	0
Chislehurst Wesleyan Church	20	15	0
St. James, Holloway	52	9	8
Church of the Ascension, Balham-hill	55	8	0
St. Paul's, Forest-hill	50	0	0
St. Mildred, Lee	38	13	11
St. Stephen, North Bow	23	10	0
Christ Church, Lee-park	46	12	1
St. Michael, Southfields	30	9	0
Morden Parish Church	23	12	1
Royal Military Chapel, Wellington Barracks	56	0	0
St. Matthew, Brixton	51	9	1
St. Peter and St. Paul, Streatham	57	13	9
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July 4th.

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The Roman Catholic University Question in Ireland.

THE recent debate on the question of a university for Irish Roman Catholics and the recent pronouncements of the Roman Catholic bishops have served to rouse again a passing interest in this important matter. It is now nearly half a century since an unchartered and unendowed Catholic University was founded in Ireland by the great Cardinal Newman, yet there seems ample grounds for the recent statement made by Mr. Balfour. After alluding to the indifference and imperfect realisation by the people of England of the importance of higher education as an element of national life he said: "Until a change takes place in public opinion which has not yet taken place this cannot be made a Government question." The problem, accordingly, seems further from solution now than it did in the year 1854 when the so-called Catholic University was opened in St. Stephen's Green. It may interest the readers of THE LANCET to know how the medical portion of that institution—the Medical School of the Catholic University—has fared since then, and the position which it occupies now. Founded some 40 years ago in Cecilia-street, Dublin, it received for some years an endowment from the funds collected from the Roman Catholic public for the support of the University. This was ultimately discontinued and the Medical School has ever since succeeded in shifting for itself and in yet maintaining a good position among the medical teaching institutions of Dublin. Notwithstanding its poverty it withstands the powerful rivalry of the Medical School of the Dublin University and that of the Royal College of Surgeons. It is generally known as the Cecilia-street Medical School, and although it is the only portion of the old Roman Catholic University which has remained and continued to survive the absence of the long hoped for charter and endowment there is nothing unfairly sectarian or bigoted in connexion with it. It is incorporated under the Government Scheme Educational Endowments (Ireland) Act, approved by the Lord Lieutenant in Council, May 24th, 1892. Its board of visitors contains the name of at least one well-known Protestant of eminence—Sir John Banks, K.C.B., M.D. Dub. One of its permanent staff of lecturers is a Protestant—Professor J. H. Stewart, B.A., B.Ch.—while there is always a certain proportion of Protestant students on its books and attending its various courses of lectures.

The Anti-tuberculosis Conference.

A very representative conference which was called together under the auspices of the Royal Academy of Medicine of Ireland met on June 30th at the Royal College of Physicians of Ireland, Kildare-street, for the purpose of taking measures for the prevention of tuberculosis in Ireland. His Excellency the Lord Lieutenant occupied the chair. After a statement by the President of the Royal Academy of Medicine as to the circumstances under which the present conference came to be held the resolutions adopted at former conferences were read and the measures to prevent the spread of tuberculous infection were enumerated as follows:—

1. To check the spread of the disease among human beings: (*a*) by the adoption of general sanitary measures; (*b*) by special sanitary measures, including the establishment of State-aided bacteriological laboratories; (*c*) by providing sanatoria for isolation and curative treatment; and (*d*) by separation of tuberculous persons in all rate-aided institutions.
2. To prevent the spread of the disease from animals to human beings: (*a*) by the control of dairy cattle and milk supplies; and (*b*) by the control of meat supplies and the inspection of slaughter-houses and all meat killed for food.

The Registrar-General (Dr. Grimshaw) proposed:—

That with the view of promoting measures for the prevention of tuberculosis it is desirable that a branch of the National Society for the Prevention of Consumption and other forms of Tuberculosis should be formed for Dublin and its vicinity and that a Dublin branch be accordingly hereby formed.

In an interesting speech he gave some rather startling facts as to the prevalence of tuberculosis in Ireland. In Great Britain, although it caused annually 70,000 deaths, the disease showed a tendency to decrease, while in Ireland within the past two decades the tendency had been in the opposite direction. In the period 1871–80 10 per cent. of all the deaths in Ireland were due to one form of tuberculosis and 19½ per cent. represented the rate of those who died from

insanity, 108; senile insanity, 97; general paralysis, 76; alcoholic insanity, 74; congenital feeble-mindedness, 33; and puerperal insanity, 18. Of the puerperal cases recovery was noted in 14, a ratio of 80 per cent.

Down District Asylum (*Annual Report for 1898*).—The asylum population was 550 and the annual admissions were 126. Of the admissions 24 were classed as incurable, a ratio of 19 per cent. Of the total number of deaths 39·6 per cent. were attributed to phthisis. Open-air treatment is now adopted for all phthisical patients, together with single rooms for them to sleep in. The erection of separate blocks or pavilions is urged for the permanent accommodation of these cases. The dairy cattle are all treated with tuberculin and the daily milk supply is sterilised before use.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following were among the principal amounts received at the Mansion House during the past week in aid of this Fund. The total now exceeds £47,000:—

	£	s.	d.
St. Jude, South Kensington	742	8	9
St. Martin-in-the-Fields	178	1	6
St. Stephen's, South Dulwich (with additions)	208	14	6
Holy Trinity, Tulse-hill	162	9	4
St. Mary, Bryanston-square	243	2	1
St. Paul, Onslow-square (with additions)	493	18	3
St. Mary Abbotts, Kensington: Parish Church, £367 17*s.* 8*d.*; St. Paul's, Vicarage Gate, £108 17*s.* 4*d.*; Christ Church, Victoria-road, £89 0*s.* 4*d.*	565	15	4
Wimbledon Churches, per Rev. Canon Haygarth	167	4	4
Essex Unitarian Church, The Mall, Kensington	119	5	9
Christ Church, Chislehurst	50	5	8
Wandsworth Parish Church and Holy Trinity	86	11	8
Stamford-hill Congregational Church	91	1	8
St. Bartholomew and St. Matthew, Sydenham	134	16	2
St. Andrew, Westminster	85	4	10
Holy Trinity, Paddington	98	6	16
Holy Trinity, St. Marylebone	84	9	9
Kensington, Allen-street, Congregational Church	65	15	1
St. John, Downshire Hill	90	17	4
St. Paul, Herne Hill	43	15	5
St. Luke, Redcliffe-square	65	0	0
"P."	50	0	0
St. James, Hatcham	66	12	3
St. Luke, Deptford	58	8	0
West Wickham Churches	36	12	8
St. Mark Presbyterian Church, Greenwich	26	10	7
St. Augustine, Honor Oak	44	7	8
Christ Church, Beckenham	42	0	8
St. John, Bromley, Kent	35	3	5
Streatham-hill Congregational Church	20	18	0
Eaton Chapel, Eaton-square	40	0	0
Wanstead Meeting	31	14	0
St. Luke, West Holloway	33	13	9
New Court Congregational Church, Tollington Park	30	12	0
High Beech Church	27	19	4
Palace Chapel Royal, Hampton-court	42	3	5
Kingston Parish Church	20	0	0
Hillingdon Parish Church and Chapel	33	12	9
St. Jude, Mildmay-park	28	7	6
Camden-road Presbyterian Church and Mission	23	2	0
St. Andrew's, Whitehall-park	31	18	7
St. Dunstan, East Acton	23	16	2
St. Michael, Stockwell	30	0	0
St. Olave, Hart-street	20	0	0
All Saints, Camberwell	23	9	3
Southend Episcopal Chapel, Catford	20	8	0
Barnes Parish Church	28	5	0
St. Paul, Greenwich	20	0	0
Holy Innocents, Hornsey	20	1	3
St. Saviour, Highbury	28	8	8
St. Paul, Harringay	25	1	10
All Souls, Langham-place	71	1	0
St. John, Notting-hill	48	11	3
All Saints, Notting-hill	31	13	6
Christ Church and St. Barnabas, Finchley	30	5	4
St. Pancras Parish Church	48	11	4
St. Barnabas, Pimlico	28	13	6
St. Cuthbert, West Hampstead	24	4	0
St. Paul, Paddington	12	19	7
St. Mary, Aldermanbury	21	16	9
Congregational Church, Wimbledon	21	11	3
Willesden Presbyterian Church and Missions	40	1	0
St. Mary, Balham	41	6	7
Windsor-road Church, German Lutheran	69	9	0
Brondesbury Baptist Church	22	11	9
St. Mary Magdalene, Munster-square	23	4	11
St. Paul, Clapham	20	1	1
Ferme Park Baptist Church	23	7	10
St. Stephen, Avenue-road	25	16	7
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St. Mary Magdalene, Peckham	42	7	1
Wanstead Parish Church and Christ Church	43	10	10
St. Philip, Sydenham	32	8	5
St. Mary, Spring-grove	30	0	0
St. George, Tufnel-park	44	10	6
Gray's Inn Chapel	60	0	0
St. Anselm, Pinner	26	8	10
St. Mary, Monken Hadley	32	2	1
Emmanuel Church, Wimbledon	70	1	0
Streatham Parish Church and Chapel	78	2	1
St. Paul, Canonbury	31	6	6
Emmanuel Church, West Hampstead	24	5	9
St. Andrew, Totteridge	28	0	7
Clapham Parish Church	61	10	0
St. John, Highbury Vale	22	14	9
Upper Clapton Congregational Church	20	10	10
Christ Church, Woburn-square	26	1	0
Chislehurst Wesleyan Church	20	15	0
St. James, Holloway	52	9	8
Church of the Ascension, Balham-hill	55	8	0
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THE recent debate on the question of a university for Irish Roman Catholics and the recent pronouncements of the Roman Catholic bishops have served to rouse again a passing interest in this important matter. It is now nearly half a century since an unchartered and unendowed Catholic University was founded in Ireland by the great Cardinal Newman, yet there seems ample grounds for the recent statement made by Mr. Balfour. After alluding to the indifference and imperfect realisation by the people of England of the importance of higher education as an element of national life he said: "Until a change takes place in public opinion which has not yet taken place this cannot be made a Government question." The problem, accordingly, seems further from solution now than it did in the year 1854 when the so-called Catholic University was opened in St. Stephen's Green. It may interest the readers of THE LANCET to know how the medical portion of that institution—the Medical School of the Catholic University—has fared since then, and the position which it occupies now. Founded some 40 years ago in Cecilia-street, Dublin, it received for some years an endowment from the funds collected from the Roman Catholic public for the support of the University. This was ultimately discontinued and the Medical School has ever since succeeded in shifting for itself and in yet maintaining a good position among the medical teaching institutions of Dublin. Notwithstanding its poverty it withstands the powerful rivalry of the Medical School of the Dublin University and that of the Royal College of Surgeons. It is generally known as the Cecilia-street Medical School, and although it is the only portion of the old Roman Catholic University which has remained and continued to survive the absence of the long hoped for charter and endowment there is nothing unfairly sectarian or bigoted in connexion with it. It is incorporated under the Government Scheme Educational Endowments (Ireland) Act, approved by the Lord Lieutenant in Council, May 24th, 1892. Its board of visitors contains the name of at least one well-known Protestant of eminence—Sir John Banks, K.C.B., M.D. Dub. One of its permanent staff of lecturers is a Protestant—Professor J. H. Stewart, B.A., B.Ch.—while there is always a certain proportion of Protestant students on its books and attending its various courses of lectures.

The Anti-tuberculosis Conference.

A very representative conference which was called together under the auspices of the Royal Academy of Medicine of Ireland met on June 30th at the Royal College of Physicians of Ireland, Kildare-street, for the purpose of taking measures for the prevention of tuberculosis in Ireland. His Excellency the Lord Lieutenant occupied the chair. After a statement by the President of the Royal Academy of Medicine as to the circumstances under which the present conference came to be held the resolutions adopted at former conferences were read and the measures to prevent the spread of tuberculous infection were enumerated as follows :—

1. To check the spread of the disease among human beings: (*a*) by the adoption of general sanitary measures; (*b*) by special sanitary measures, including the establishment of State-aided bacteriological laboratories; (*c*) by providing sanatoria for isolation and curative treatment; and (*d*) by separation of tuberculous persons in all rate-aided institutions.

2. To prevent the spread of the disease from animals to human beings: (*a*) by the control of dairy cattle and milk supplies; and (*b*) by the control of meat supplies and the inspection of slaughter-houses and all meat killed for food.

The Registrar-General (Dr. Grimshaw) proposed :—

That with the view of promoting measures for the prevention of tuberculosis it is desirable that a branch of the National Society for the Prevention of Consumption and other forms of Tuberculosis should be formed for Dublin and its vicinity and that a Dublin branch be accordingly hereby formed.

In an interesting speech he gave some rather startling facts as to the prevalence of tuberculosis in Ireland. In Great Britain, although it caused annually 70,000 deaths, the disease showed a tendency to decrease, while in Ireland within the past two decades the tendency had been in the opposite direction. In the period 1871–80 10 per cent. of all the deaths in Ireland were due to one form of tuberculosis and 19½ per cent. represented the rate of those who died from

consumption per 10,000. In the following decade those figures rose respectively to 11½ and 21, so that in Ireland they were in a distinctly worse position than in Great Britain. The resolution was seconded by Dr. James Little and supported by his Excellency the Lord Lieutenant in a long and most interesting speech. He stated that he agreed with Dr. Little in thinking that legislative measures for the treatment of this great evil should occupy a secondary position. The necessity, he said, of making the public thoroughly alive to the danger was of the first importance, for protective measures had rarely been taken up by the Legislature until the British public had been roused to the danger which they underwent by not dealing with them. His Excellency also suggested that instead of forming an independent association for the prevention of tuberculosis in Ireland—an Irish association—it might be better to look upon the association as a branch of the London and English movement.

A Government Bacteriological Laboratory in Dublin.

The London correspondent of the *Irish Times* is responsible for the following statement: "In consequence of the bacteriologist of the English Local Government Board being unable to supply to Ireland a sufficient quantity of glycerinated calf lymph it has been decided to equip a bacteriological laboratory in Dublin."

The Local Government Board of Ireland.

There seems of late to be a great deal of friction between the Local Government Board, which has its headquarters in Dublin, and various public bodies in the provinces of Ireland. There is a standing dispute in reference to the qualification of nurses, to which reference was made in THE LANCET of July 1st, as regards the Limavady Guardians and which is causing a great deal of opposition all over Ulster, and hardly a week passes now without a decided difference of opinion as regards the action of this central controlling body. Recently at Armagh the Local Government Board sent a letter with their decision in reference to a late sworn inquiry held there by their medical inspector as regards alleged irregularities in connexion with the treatment of an inmate who died in the workhouse infirmary; but at a meeting of the Armagh Guardians held on June 27th it was decided unanimously not to read the decision of the Local Government Board until the guardians had been supplied with copies of all correspondence with reference to the subject. One of the guardians remarked that they did not ask the Local Government Board to hold the inquiry and they did not know at whose instance the central authorities directed the investigation. Again, in reference to Whiteabbey water-supply the Belfast No. 1 (Antrim) Rural District Council have protested against "the unjust and unwarrantable imposition of a water-rate on the other portions of the district outside the original water-supply area" made by the Local Government Board in Dublin and one of the leading Belfast daily papers supports this view on the ground that it is unfair that people who live outside the area of the water-supply and do not profit by it should be compelled to pay part of the expense incurred in providing a supply. All over the north of Ireland at present the Local Government Board seems to be getting out of touch with local bodies and there is a growing tendency no longer to regard its measures as infallible. It is hoped that opinion in Ireland will not come to be in agreement with that of Lord Thring who stated in the House of Lords on June 27th, in committee on the London Government Bill, that the people of the Local Government Board Department knew as much about municipal finance as they do about the policy, political and social, now prevailing in the planet Mars. In the House of Commons on June 30th Unionist and Nationalist Members joined together in attacking the Local Government Board in Ireland for their extraordinary action in reference to a lady—Miss Magill—who was appointed rate collector by the Clogher (County Tyrone) Board of Guardians last year. It would appear that for the last five years of her father's tenure of this office this clever young woman discharged all the duties of the office so admirably that after his death the guardians on June 11th, 1898, appointed her to the post. Instead of acting with the guardians the Local Government Board in the most arbitrary manner issued an order on July 22nd, 1898, directing that Miss Magill should not exercise any of the powers or perform any of the duties of the office of rate-collector. The Clogher Board of Guardians declined to act on this order and the Local Government Board thereupon dissolved the board and appointed two paid guardians to discharge their duties. The whole case is discussed in articles in the *Westminster Review* of September, 1898, and February, 1899, and has caused a great commotion in all women's associations. The utter absurdity of the Local Government Board's course of action is that the lady had done the whole work during her father's lifetime and so had proved her fitness for the post. Sir Walter Foster, in the discussion in Parliament, said he considered it a blunder that the central authority should have exercised arbitrary authority of that kind, while Dr. Rentoul (a strong supporter of the Government), said the interference of the Local Government Board in the newly appointed bodies was giving great dissatisfaction in different parts of Ireland.

July 4th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Club Foot.

AT the meeting of the Academy of Medicine held on June 27th M. Peraire and M. Mally communicated details of a form of surgical treatment in cases of paralytic club foot by the use of a musculo-tendinous anastomosis. The treatment is only applicable to those cases of club foot which follow infantile paralysis and when the muscles of the leg are not universally paralysed. The extent of the paralysis is mapped out by an electrical examination. An incision is made over the tendon of the affected muscle. A slip is taken from this tendon and sutured to a similar slip dissected from the tendon of a healthy muscle in the neighbourhood of the affected one, provided of course that the action of the healthy muscle is not antagonistic to the action of the paralysed one. The foot is then put up in a plaster bandage for 15 days, at the end of which time the patient is permitted to try to walk. The tibialis anticus and the peronei when paralysed can be supplied by using the gastrocnemius and soleus (triceps), while similarly the latter can be supplied by using the deep muscles of the leg and the peronei. Paralysis of the tibialis anticus alone is remedied by grafting its tendon to that of the extensor proprius pollicis. By this operation the functional condition of certain kinds of paralytic club foot can be in great measure relieved and it is, in fact, the operation of election for cases of club foot in which certain groups of muscles are paralysed. It is preferable to osteotomy and it obviates the necessity for extensive resections of the bones of the foot.

Antisepsis in Extremis.

A Parisian who was lately travelling by train refused to show his ticket to a travelling inspector of the company. The passenger was accordingly summoned by the company for refusing to show his ticket as he was bound to do by law. He argued, however, that he had not refused to show it (*présenter*), that he had let the inspector see it so that he could easily satisfy himself as to its being in order, but that he certainly had refused to let the ticket inspector take it into his hands because his hands were so dirty. He, the passenger, therefore was unwilling to put into his pocket a ticket which would be contaminated with microbes and might very likely give him some disease. After a long legal discussion as to the exact meaning of the word "show" (*présenter*) the court fined this ardent disciple of modern hygiene the sum of one franc.

A Medical Naval Minister.

The Naval Minister in the new Cabinet is Dr. de Lanessan, Professor of Natural History at the Academy of Medicine. He is well known for his botanical researches and writings. Amongst the latter is an admirable translation of Fluckiger and Hanbury's "History of Drugs."

Treatment of Penetrating Wounds of the Chest.

At a recent meeting of the Academy of Medicine M. Delorme summarised in the following manner the treatment of penetrating wounds of the chest These wounds for the most part heal very easily, especially if they have been produced by ordinary revolver bullets or by weapons or instruments which inflict cuts or stabs; it is exceptional for them to become septic, so that infection is not much to be feared. The treatment of wounds of the lung, whether simple wounds or wounds complicated

with hæmorrhage, hæmoptysis, hæmothorax, hæmopneumothorax, or embedded bullet, consists firstly in perfect rest, immobilisation of the thorax, and sealing of the wound; and, secondly, according to the varying conditions of the case, in the employment of morphine, ether, and caffeine. Injections of artificial serum are a powerful means of combating traumatic anæmia, provided that the injections are neither too large nor too rapidly administered. If the injections are excessive they are liable to engorge the lung, to increase the difficulty of breathing, and even to prolong the bleeding. These therapeutic means are applicable when the hæmorrhage is not very great, but sometimes it becomes excessive and then the only resource is to look for the bleeding point. It is necessary in this case to make a free incision and to find the origin of the hæmorrhage which often corresponds to a bronchus that has been opened together with its vessels. The bleeding may then be stopped by ligaturing the part *en masse*, but the operation is a bold one. In two cases, one in the practice of an Italian surgeon and the other in that of M. Delorme, the bleeding was stopped by ligaturing the focus of hæmorrhage, but the patients died soon afterwards. When the hæmorrhage is accompanied by extensive pneumothorax recourse must be had to direct compression and sealing the wound.—M. Lucas-Championnière said that he differed from M. Delorme as to the course to be taken in cases of immediate overwhelming hæmorrhage. In two instances of this kind he had found that perfect rest resulted in recovery, whereas surgical intervention would have been certainly fatal. When syncope is threatening the slightest wound may cause death. Even extensive wounds of the lung may heal spontaneously if they are left to themselves and, on the other hand, very small wounds of the same organ may bleed for an indefinite time if they are disturbed by injudicious interference. When the surgeon refrains from operating the prospects of the patient are better than when he opens the pleura freely and gropes about in search of the bleeding vessel.

July 5th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Successful Operation for Pulmonary Gangrene.

A CASE of gangrene of a lung cured by operation is described by Dr. von Meyer in the *Deutsche Zeitschrift für Chirurgie*. The patient was a woman, 34 years of age, who was admitted into the Deacon's Hospital at Frankfort for miscarriage in the fourth month of pregnancy. There was abundant hæmorrhage together with fever which continued even after the removal of the gangrenous placenta, followed by irrigation and plugging of the uterine cavity with iodoform gauze. Her pulse was very quick and her tongue was dry, but there were no symptoms of peritonitis. On the eighth day she complained of pain in the chest and coughed very much, bringing up blood-stained sputum; there were also some small pneumonic foci in both lungs. In the ensuing weeks the sputum became very abundant and fœtid and over the lower lobe of the right lung the percussion note was dull with bronchial respiration and rhonchi. In course of time the signs of a large cavity showed themselves in this locality and on an exploratory puncture being made fœtid pus was withdrawn. Dr. von Meyer thereupon removed a piece of the eighth rib under the right scapula and made a large incision in the lung through which 200 cubic centimetres (seven fluid ounces) of fœtid pus and slough were removed; a drainage-tube was then introduced and the cavity was filled with gauze. After the operation the patient was rather exhausted, but on the next day she was much better than before the operation. The distressing cough ceased, she was able to lie on her back, and before long her temperature fell to normal. A considerable amount of necrotic tissue was discharged through the drainage-tube, but in less than six weeks the large wound was soundly healed with only a slight retraction of the lower part of the thorax. Dr. von Meyer mentions that the mortality after operations for septic conditions of the lungs is 65 per cent. and that after operations for pulmonary gangrene the mortality is 35 per cent.

New Pathological Institute.

The Charité Hospital of Berlin, the oldest and largest hospital of the city, is in course of demolition and rebuilding in accordance with modern requirements. This great work will be spread over several years, the reconstruction being gradual, so that a part of the hospital may always be open, for the Charité Hospital contains the majority of the university clinics, attendance at which is an essential part of the training of medical students. The first department to be completed was the pathological institute, where the necropsies of the patients who have died in the hospital are performed. The old pathological institute in the garden of the Charité Hospital was very well known to all, whether students or graduates, who have attended the medical classes of Berlin University. They will remember that the accommodation for students was insufficient, the amphitheatre, the dissecting-room, and the microscopical department being too small for the workers attracted by the teaching of Professor Virchow who is at the head of the institute. But the principal drawback was that through want of space the valuable museum of pathological and anatomical preparations collected for many years by Professor Virchow and his predecessors could only be used to a very limited extent by the students. The new building which was formally opened on June 27th is a remarkable advance on the old one. It comprises a large amphitheatre seated for 250 persons, dissecting rooms, rooms for microscopical work and for other purposes, and a special wing for the pathological museum. A distinguished company was present at the opening ceremony, including the Minister of Public Instruction, the Surgeon-General of the Army, the Rector of the University, and many hospital physicians and surgeons. Professor Virchow in his inaugural address thanked the Government for the liberal manner in which the requisites for this fine establishment had been supplied. He then gave a history of the Pathological Institute, saying that the study of pathological anatomy must be carried on in connexion with hospital work. Some parts of the museum, he said, would be open to the general public. He was of opinion that the public might benefit by knowing something of the most frequent morbid conditions of the human body. After an address delivered by Professor Waldeyer, the Rector of the University, the visitors were shown over the premises which were unanimously declared to be admirably adapted to their purpose.

Accidents in Orthopædic Surgery.

Dr. Kaposi describes in the *Münchener Medicinische Wochenschrift* a case in which an operation for flat foot was followed by serious symptoms almost resulting fatally. The patient was a boy, 15 years of age, in the surgical clinic of Heidelberg. An anæsthetic having been given the foot was supinated and fixed in that position by a plaster bandage. The father was told to bring the boy back in three weeks, but he reappeared in six days complaining of great pain in the foot which on the removal of the bandage was found to be swollen and inflamed. Wet compresses were therefore applied and the boy was sent home at the father's request. In five days he returned with symptoms of septicæmia, having a temperature of 39·7° C. (103·4° F.) and a pulse of 140. There was swelling and pain especially over the cuboid and fifth metatarsal bones. A free incision was made and more than a tablespoonful of pus was evacuated. The cuboid bone was partly necrosed and a sequestrum was removed. After the operation the patient's state improved, but a fortnight later the fever recurred with swelling and pain over the ankle-joint. The pulse was exceedingly quick and the boy's general state was worse than before. The joint was therefore incised and drained, after which the boy gradually recovered. The flat foot had of course become worse owing to the removal of nearly the whole of the cuboid bone. The case was obviously one of acute osteomyelitis following the reduction of the flat foot apparently without any cause. Dr. Kaposi suggests a hæmatogenous infection. Another accident complicating orthopædic treatment of club foot has been brought to his notice by Professor Jordan. The deformity was overcome by tenotomy of the tendo Achillis and incision of the plantar fascia and a plaster bandage was then applied. Severe pain followed, so that the plaster bandage had to be removed after a few days, but, as nothing abnormal was found, another bandage was applied. The pains ceased, but marked paræsthesia, formication in the course of the internal plantar nerve, and itching ensued. The patient became sleepless and highly neurasthenic and was unable to take food, so that she grew very weak. The

dressing was then entirely removed and massage and electricity were employed. In time the pains were relieved but they did not disappear in less than six months. Obviously an irritation of the plantar nerve had been caused by the stretching of the foot.

July 5th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The late Medico Primario of the Santo Spirito Hospital.

THE tragic death of Dr. Enrico Bondi, head of the cliniques of the Santo Spirito Hospital, has evoked universal sympathy for his widow and young family. His Majesty King Humbert, besides sending a characteristically touching message of condolence, has interested himself personally in Madame Bondi's behalf. The bereaved lady, I understand, will receive a pension of 3000 lire (£120) annually, terminable only in the event of her death or of her second marriage, when 1800 lire (£72) will be assigned yearly to her son. Meanwhile, on the principle that "there is never smoke without fire," a polemic, sufficiently animated in its tenour, is now in progress as to whether the conditions to which patients in general, and phthisical patients in particular, are subjected in the Santo Spirito Hospital do not, in some measure, explain the remonstrances and the vindictive reprisals of the said patients against the management and its *personnel*. Inquiries as to the "dispozione delle sale" (arrangement of the wards), the "sorveglianza" (surveillance) of the patients, and the food on which they fare will disclose, it is said, a state of things by no means satisfactory, not in the Santo Spirito Hospital merely, but in all the other hospitals of Rome.

"*Phrenasthenia.*"

The term was coined in 1874 by the great Lombard alienist Dr. Andrea Verga, but it is now being superseded by others based on the practical English distinction between the idiot and the imbecile. That distinction recognises the former—the idiot—as "defective in organisation"; the latter—the imbecile—as "defective in power." Of the two the idiot child is much the less hopeful in the hands of the medico-psychologist; the imbecile child, on the contrary, is educable up to within little short of the normal type. Italy, recognising the distinction in classification, applies the name "tardivi" to the latter group of children and is now, I am happy to say, making vigorous, systematic efforts to rehabilitate them. Hitherto her record in this direction has been worse than discreditable—simply scandalous. For her "phrenasthenic" youth Switzerland has eight institutions, Austria 12, Sweden 29, Great Britain 39, Germany 40, the United States of America 50, and Italy one! Even this one is private in its initiative and management, and the circumstances of its inception and completion are interesting. Some 20 years ago Signor Antonio Gonnelli-Cioni was an elementary school teacher in Florence; then he became attached, also as teacher, to a deaf and dumb asylum, and his twofold experience was not thrown away upon him. He had satisfied himself that many children sent to school are really "phrenasthenic," and that there they lose their own time and curtail that of their less backward fellows. He had also satisfied himself that many so-called deaf-mute children are really idiots or imbeciles and ought to be dealt with in special institutions. Still working out his ideas in this direction he visited many asylums for the idiot and the imbecile abroad, studied their methods and estimated their results, and so, full of an enlightened solicitude for those "strangely visited" youth in his own country he returned, to found, just 10 years ago, an institution for the education of the "phrenasthenic" young at Chiavari. Three years later he transferred the institution to Vercurago, a beautifully situated hamlet on the borders of the Brescian and Comasque provinces close to the river Adda, so famed in Manzoni's great romance, and there, with the aid of his wife, his daughter, and a medically trained specialist (Dr. Zaccaria Lucchini), he now educates and trains for entry into civil, wage-earning life as many as 50 "tardivi" varying from five to 21 years of age. They come to him unable even to feed or clothe themselves, with their faculties dwarfed or dormant. They leave his hands so far rehabilitated as to take care of themselves, in some cases to be self-supporting, and in every case fit for social intercourse and coöperation. This, as I have said, is the institution referred to as Italy's one equivalent for the many which her sister nationalities maintain. But it will no longer remain in that isolated position. In Tuscany on August 1st will be opened an institution on the same lines and for a similar object at S. Maria a Coverciano with an even fuller equipment of teachers and consultants mostly drawn from the Florentine "Istituto di Studi Superiori"; and at Turin the town council will shortly found an institution of its own, also on the lines of that at Vercurago. As usual, it is the medical faculty in all its branches which lends the most effective assistance to these local movements for the rehabilitation of the neglected, abandoned, or "strangely-visited" young; and as I write a list of the Turinese "Comitativo esecutivo" bears out my statement with the distinguished names of Professor Bizzozzero and Professor Pagliani.

The Rector Magnificus of the Roman University.

In the recent election to this post medicine has scored again, as in other seats of learning throughout the kingdom. There were two candidates: Dr. Luigi Luciani, Professor of Physiology in the Medico-Chirurgical faculty, and Professor Valentino Cerruti, who holds the chair of Theoretical Mechanics in the faculty of Mathematics and Physics. The latter had been rector before, but, in spite of his deserved popularity, the votes recorded in his favour were 25 as against 28 recorded for his rival. The result, I am assured, has made "ottima impressione" (an excellent impression).

July 1st.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

Annual Meeting of Swiss Medical Men.

THE annual meeting of Swiss medical men which took place this year at Zürich was attended by over 200 practitioners. Professor Eichhorst spoke on a fatal case of hæmorrhagic nephritis in a boy aged 12 years due to common sorrel, a quantity of which had been consumed by the patient the day before he was taken ill. (I drew attention to this case in THE LANCET of July 1st.) Professor Eichhorst discoursed on the difficulty of the differential diagnosis between secondary cancer of the liver and multilocular echinococcus of the liver, a case of which had just ended fatally at the clinique. Professor Eichhorst had only seen three cases of echinococcus of the liver in 15 years of hospital practice at Zürich out of a total of 20,000 hospital cases and he had only seen one other case in private practice; he therefore could not agree with the German authors who said that echinococcus occurred very frequently in Switzerland. He also exhibited cases of bulbar paralysis, syringomyelia, and Erb's muscular atrophy. Professor Krönlein exhibited a woman from whom he had removed during the third month of pregnancy and without any bad effect on the pregnancy a large tumour of the kidney weighing 19 lb. This proved to be a unique tumour, a fibro-cysto-adenoma. He spoke on nephrectomy and said that he had lost only eight patients out of 56. The operation was especially successful in the case of unilateral tuberculous kidney, all of his 12 cases having recovered, some of which he exhibited in perfect health. His method of osteoplastic resection to obtain access to the back of the orbit had of late found great favour with ophthalmic surgeons. He exhibited a boy, aged 15 years, operated on after this method for angio-sarcoma behind the globe a year ago. The optic nerve being severed the boy was blind in one eye, but had kept his eye, and the cicatrices from the operation disfigured him very little. A case of traumatic ulcer of the stomach which showed gastric symptoms, as vomiting, pain, then hæmorrhage, and afterwards cachexia, was successfully operated upon four months after the original injury, which consisted in a blow from a pitchfork in the pit of the stomach. The ulcer, which was situated near the pylorus, was removed and the patient made a rapid recovery.

Increase of Population of Swiss Towns.

The influx of inhabitants from the country to the towns and also from surrounding countries (Germany, Austria, and Italy) to the Swiss commercial centres has been so rapidly

increasing from 1889 to 1898 that in Berne, Basle, and Zürich the population has increased by from 50 to 70 per cent. Building activity has been the special reason, many public and private buildings having been erected, but now the influx has greatly decreased owing to an over-production of dwelling-houses and business places, and a healthy reaction is taking place. The increase of population in Zürich, which from 1894 to 1897 was between 10,000 and 11,000 annually, is only 3000 for 1898, bringing the population up to 163,000 for January, 1899. Happily the existing laws for building (I refer especially to Zürich) are such that plenty of room is left for streets and public places. The drainage is perfect and the building laws as regards thickness of walls, proper building material, and the time enforced for drying the newly built houses are strict, so that the public weal cannot suffer. Every effort is made to ensure existing promenades and gardens from being built over and to lay out new ones. We shall also soon have two funicular railways which will take the inhabitants in a quarter of an hour up to the fine fir woods on the hills round the town.

Zürich, July 2nd.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Dispensary Abuses.

AFTER three years of agitation the medical profession has succeeded in securing the enactment of a law in the State of New York which places the dispensaries under the control of the State Board of Charities. There are not far from 200 dispensaries in the State and they are very rapidly increasing. The special feature of their management which has excited the opposition of medical men is the method of indiscriminate treatment of all applicants without regard to their pecuniary abilities. In the city of New York it is estimated that 50 per cent. of the sick are treated annually in the dispensaries. But there are many other features of the management which are deserving of correction. Many dispensaries are located in drug-stores; others are in dilapidated and insanitary buildings; all have but a single waiting-room where both sexes congregate; none has any facilities for separating contagious diseases; and in few is the druggist a qualified graduate of a school of pharmacy. The law empowers the State Board of Charities to make rules and regulations governing the management of these institutions and to grant them a licence to conduct their business. Any violation of these rules may be punished by withdrawing the licence and by fines. The law will come into effect on Oct. 1st. Meantime the State Board is preparing the form of licence and is also formulating the rules and regulations which are to govern the management of all the dispensaries of the State. It is anticipated that this law will prove very beneficial both in limiting the number of dispensaries to the actual wants of the people and by improving the management of those licensed.

The Extermination of Yellow Fever.

One of the most marked benefits to the United States which is likely to result from the late war with Spain is the possible extermination of yellow fever in its old habitats in Cuba. The thorough cleansing to which Santiago and Havana have been subjected has already given evidence that the yellow fever foci of these hitherto pest-stricken cities have been greatly changed if not altogether destroyed. Though the yellow fever season is well advanced only one or two authentic cases of that disease have been reported. A similar sanitary cleansing is going on in all of the smaller towns and with equally favourable results as regards the improvement of the general health and the absence of cases of yellow fever. Another feature of the sanitary management of the island is very important in securing not only the protection of the United States from an invasion of yellow fever but also the protection of one Cuban city from the infectious and contagious disease of another. I refer to the introduction of the methods of medical inspection of commerce and travel by officers of the United States Marine Hospital Service, so thoroughly matured in this country. Heretofore every epidemic of yellow fever in this country has been directly traced to the lax and worthless methods of inspection pursued by the local health authorities of the island. Now the local officers are entirely subordinate to the Government at Washington and the most rigid medical inspection is maintained of the shipping as well as of the town with a perfect system of notification. It probably cannot result that no spread of yellow fever will occur during the present year, so recently has the new *régime* come into operation, but it is already evident that the extermination of yellow fever from Cuban cities by enlightened sanitation is in the near future. The commercial value of such a reform to the United States may be approximately estimated when the fact is recalled that many of the recent epidemics of yellow fever imported from Cuba have cost the business interests of this country from 100 millions to 200 millions of dollars, beside the widespread desolation caused by the migration of the people and the large sickness- and death-rates.

Improvements in the Treatment and Care of the Insane.

The annual meeting of the American Psychological Association was held recently in the city of New York and a large number of interesting papers were read illustrating the progress of psychiatry in this country. There was a manifest tendency toward what is called the State care of the insane in preference to county care. New York is the most conspicuous example of a State which adopted the system of State care, thereby removing all the insane from the counties to the State hospitals. The result has been most favourable to the insane and the question is being widely agitated in other States. Should not the insane be everywhere recognised as wards of the State and come under its sole jurisdiction? One feature of the meeting was an evening given to the discussion of epilepsy which brought out the experience of those who have the superintendence of State institutions for epileptics. These colonies are exciting a large amount of public and professional interest throughout the entire country and the effect is to greatly increase their number. The Craig colony for the insane in the State of New York, embracing upwards of 2000 acres of arable land and designed to accommodate 2000 inmates, is making a striking success in the treatment of epileptics. It reports the recovery of some of the most helpless and hopeless epileptics of the county almshouses. The institutions for epileptics in Ohio, Massachusetts, and Pennsylvania are doing excellent work. The treatment of the insane by the Scotch system of "boarding-out" was for the first time advocated by a superintendent of a State hospital. The subject of a more effective system of colonising the chronic insane was brought forward in the annual address.

Reorganisation of the Army Medical Corps.

At the recent meeting of the American Medical Association it was resolved to recommend to the Government: (1) that the medical corps of the army and navy be enlarged to meet properly all the demands which may be made upon them; (2) that transportation of medical supplies be under the control of the medical department; (3) that a corps of sanitary inspectors be created whose duty it shall be to examine into the sanitary condition of camps and bodies of troops in transit and advise in relation thereto; (4) that the Government establish permanent camp sites, the selection to be subject to the approval of the surgeon-general, for use in the mobilisation of large masses of troops; (5) that a professor of military hygiene be appointed at West Point to instruct the cadets in the principles of sanitation; (6) that the medical officers of the National Guard be subject to rigid examination both for admission to the service and for promotion; (7) that the surgeon-general of the army and navy in time of peace and war be empowered to call into requisition the services of skilled specialists; and (8) that the President of the United States be respectfully urged to recommend to Congress the appointment of an army medical commission, to be composed of physicians and sanitarians to be taken from military and civil life, including the surgeon-general of the army and navy, whose duty it shall be to prepare a report containing a detailed plan of a modern system to govern the medical departments of the army and navy in peace and war.

United States Marine Hospital Service.

A board of officers will be convened in New York city on June 27th to examine candidates for admission to the grade of assistant surgeon in the United States Marine Hospital Service. Upon appointment to this service the young officers are, as a rule, first assigned for duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco. After five years' service assistant surgeons are entitled to examination for promotion to the

grade of passed assistant surgeon. Promotion to the grade of surgeon is made according to seniority and after examination as vacancies occur in that grade. Assistant surgeons receive $1600; passed assistant surgeons, $2000; and surgeons, $2500 per annum. When quarters are not provided commutation at the rate of $30, $40, and $50 a month, according to grade, is allowed. All grades above that of assistant surgeon receive longevity pay, 10 per cent., in addition to the regular salary for every five years' service. The tenure of office is permanent.

National Bureau of Public Health.

On the recommendation of the Executive Committee the American Medical Association unanimously adopted resolutions endorsing the establishment of a national bureau of public health, with a Cabinet officer at its head, together with instructions to the board of trustees to set aside a certain sum of money for the use of the special committee appointed in connexion with this matter.

June 19th.

Obituary.

SIR WILLIAM HENRY FLOWER, K.C.B., F.R.S., F.R.C.S. ENG.

SIR WILLIAM FLOWER, until lately Director of the Natural History Department of the British Museum, died on July 1st at his residence, 26, Stanhope-gardens. He had for some time past been in failing health, and although he had derived some benefit from a stay during the winter on the Riviera, yet it was evident on his return to London in May that his health was in a very unsatisfactory condition. He was born at Stratford-on-Avon in the year 1831, his father being the late Edward Fordham Flower, and he received his education at University College, London. In 1854 he entered the army as assistant surgeon to the 53rd Regiment and accompanied it through the Crimean War, receiving the Crimean medal with four clasps and the Turkish medal in addition. On returning to England he took the diploma of F.R.C.S. Eng. in 1857, and from 1859 to 1861 he held the post of assistant surgeon to, and demonstrator of anatomy at, the Middlesex Hospital. Subsequently he was appointed to the conservatorship of the Hunterian Museum of the Royal College of Surgeons and was chosen Hunterian Professor of Comparative Anatomy and Physiology in 1869. In 1884 he succeeded Sir Richard Owen as Director of the Natural History Museum, a post which he held till failing health compelled him to resign.

Sir William Flowers's scientific work for the most part took the form of gathering up facts and classifying them rather than that of investigation pure and simple; nevertheless by his death science has lost a most valuable worker. As an example of the importance of his work while in charge of the Hunterian Museum it may be mentioned that in 1884 the collection of materials for studying the physical characteristics of the different races of men consisted of 89 skeletons and 1380 skulls (exclusive of the Davis collection), while in 1864 the skeletons numbered 18 only and the skulls 242. A great deficiency was thus supplied and increased opportunities for the study of osteological variations in man were afforded, for he never let slip an opportunity of acquiring small private collections of specimens. The greatness of the task which he set himself is shown by the fact that his osteological catalogue contained a list of no less than 1300 skulls with carefully verified measurements.

So much did he realise the important part which museums play in scientific work that he spent nearly the whole of his life in directing or studying their practical organisation, and both by precept and example endeavoured to show that a mere collection of unclassified specimens did not constitute a museum which would further the advancement of scientific knowledge. This he particularly pointed out in his presidential address to the British Association at Newcastle some 10 years ago when he said that museums promoted the advancement of scientific knowledge by affording facilities for scientific research together with opportunities for popular instruction, but if they were to be efficient the collections must be arranged with reference to their special functions as collections of classified material. His direction of the Natural History Museum at South Kensington was no unworthy example of this teaching. A reference to the catalogue of scientific papers of the Royal Society conclusively shows the extent to which he enriched scientific knowledge and amongst his various publications are: "An Introduction to the Osteology of Mammalia," "Diagrams of the Nerves of the Human Body," "Introduction to the Study of Mammals, Living and Extinct," "The Horse: a Study in Natural History," and "Essays on Museums."

To the Encyclopædia Britannica he contributed several articles—notably one on Mammalia, which showed him to be a master of the difficult art of accurately expressing oneself in a succinct manner. The memoirs which he published on Morphology—notably those on the brain and the dentition of the Marsupialia—were a great addition to our knowledge on these subjects, as were also his papers on the characters of the cranium in carnivora and on the evolution of the cetacea.

It was only fitting that a man who worked so laboriously in the cause of science should be honoured by the various learned bodies of the country. In 1864 he was elected a Fellow of the Royal Society which, moreover, awarded him a medal in 1882. In 1879 he became president of the Zoological Society and he served as president of the Anthropological Institute from 1883 to 1885. He was appointed president of the section of anatomy of the International Medical Congress which met in London in 1881. Oxford and Cambridge both conferred honorary degrees upon him and so did the Universities of Durham, Edinburgh, Dublin, and St. Andrews. The Institute of France made him one of its Corresponding Members, as did also the Royal Swedish Academy of Sciences. He was created a C.B. in 1887 and a K.C.B. in 1892.

Sir William Flower was revered by all who knew him. His genial nature and kindly sympathy endeared him to all who had occasion to consult him and his willingness to help those who sought his advice will always be gratefully remembered.

The remains of the late Sir William Flower were cremated at Woking on Wednesday, July 5th, and the urn containing his ashes was buried at Stone in Buckinghamshire on the following day. On the day of the cremation a memorial service was held at St. Luke's Church, Chelsea, which was attended by a large number of personal friends and eminent men of science.

HENRY NAUNTON DAVIES, M.R.C.S. ENG., L.R.C.P. LOND., L.S.A.

THE sudden death of Mr. Henry Naunton Davies of Porth, Rhondda, on July 3rd from apoplexy while staying at Caswell Bay removes from Welsh medical circles one of the most prominent of their members. The tale of the remarkable growth of the Rhondda valleys has often been told, but it can hardly be better appreciated than by stating that at the time of Mr. Naunton Davies's birth 70 years ago there was a population of 500 persons; when he qualified 25 years later the population was but 1000; while to-day it is close upon 130,000. His grandfather and father were medical practitioners in the district, and from his earliest days he was connected surgically with the collieries of the valley and in this capacity he was called upon more than once to face dangers not usually met with by those practising outside the coalfields. In the year 1877 he rendered such conspicuous service and displayed such unusual presence of mind under the most trying circumstances connected with a colliery accident that at the annual meeting of the British Medical Association held in the autumn of that year at Manchester he was presented with the gold medal of the Association, an honour of which he was the first recipient. The cottage hospital at Porth with its 10 beds and the only institution of the kind in the whole district was established and kept going through his energy and his support will be sorely missed. As a matter of detail he provided for the use of the hospital a most complete set of surgical instruments and he was constantly adding to the stock such of those more newly designed which seemed to be of any practical utility. He took his share in the public life of the locality, for some years being a member of the local board and at the time of his death he was an alderman of the Glamorganshire County Council, to which position he was elected upon the first formation of the council. He was also a justice of

the peace for the county and as a Freemason he was devoted to the craft only a degree less perhaps than to his profession and was held in the highest esteem by his brother masons. Only those who have lived long in a colliery district can appreciate the difficulties which a colliery surgeon has to contend with and there is not one of Mr. Davies's colleagues but would admit that on many occasions those difficulties have been smoothed over and surmounted, not only for himself but for them, by his patience, common sense, and urbanity. He was a man of few words but of prompt action and was thoroughly respected by all the medical men who came in contact with him. As a token of the regard in which he was held by the people among whom he laboured so long and so honourably he was presented only a few years ago with an oil painting of himself. He leaves two daughters and four sons, two of the latter being members of their father's profession, and one daughter is the wife of Dr. Conwy Joyce who for some years had been associated in practice with his father-in-law.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

EXTRAORDINARY MEETING OF THE COUNCIL.

AN extraordinary meeting of the Council was held on June 29th, the President, Sir WILLIAM MACCORMAC, Bart., K.C.V.O., being in the chair.

On the recommendation of the Museum Committee it was decided to buy 176 skeletons of birds from Mr. R. W. Shufeldt of Jakoma Park, Columbia, U.S.A. Also on the recommendation of the Museum Committee the Council decided to lend the series of otological specimens in the museum for display at the Sixth International Otological Congress to be held at the Examination Hall in August, 1899.

The thanks of the Council were given to Mr. S. G. Shattock for the series of microscopical slides suitable for use at the Fellowship examination presented by him to the College.

The question of installing the electric light in the museum was referred to the Museum and General Purposes Committees to consider and to report upon.

The following report from the Laboratories Committee was received:—

1. *The work on Diphtheria for the Metropolitan Asylums Board.*—Bacteriological Department. Since March 10th last 1100 doses of antitoxin each containing 2000 units, and 4425 doses each containing 4000 units, for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board, have been supplied and all the demands fully met. During this period 19,900,000 units have been supplied.
During the same period five doses of 4000 units each have been supplied to medical officers of health according to instructions received from the Metropolitan Asylums Board.
2. *The Grant from the Goldsmiths' Company.*—Under this grant 459 doses of antitoxin, containing 1,134,000 units, have been supplied to the General and Children's Hospitals in or near London.

The best thanks of the Council were given to Mr. S. G. Shattock for two medals of Giambattista Morgagni.

A report was read from the Committee of Delegates of the two Colleges on the Draft Statute No. 1 issued by the London University Commission. The report suggested certain modifications which the Council decided to forward to the Commission.

The Secretary reported that he had received two notices of motion for the meeting of Fellows and Members on July 5th.

A letter was read from the Registrar of the General Medical Council stating that the Midwives Bill Committee of that Council had reported that they felt it their duty to direct attention to the majority of the points adverted to in the report dated March 6th, 1899, of the College.

A letter was read from the Registrar of the General Medical Council calling attention to a change in the regulations in regard to registration which is to come into operation after Jan. 1st, 1900. By this proposed change no medical student can be registered until he has commenced medical study in an institution recognised by one of the licensing bodies and approved by the Council. The matter was referred to the Committee of Management to consider and to report upon.

A letter was read from Sir William Turner, President of the General Medical Council, forwarding a copy of two amended clauses for the purpose of altering the Medical Acts so as to give additional disciplinary powers and asking for an expression of opinion on the clauses. It was referred to the Discipline Committee.

A letter was read from Mr. Thomas Bryant reporting the proceedings of the General Medical Council, and the thanks of the Council were given to Mr. Bryant for his services as the representative of the College on the General Medical Council.

ELECTION OF PRESIDENT.

On Thursday next the Council of the College will proceed to the election of the President. Sir William Mac Cormac, Bart., K.C.V.O., has now held this office for two years. There is at the present time no law, written or unwritten, which determines for how long a President shall hold office. There was a time when every member of the Council occupied the presidential chair in succession, the senior of the Council succeeding naturally and without dispute to the post. In those days it hardly ever happened that the retiring President was re-elected for a second year. Later it was recognised that it was bad policy to discard such an officer as the President at the end of only one year of office, when he had become well acquainted with his duties, and thus a custom arose of electing the President for a second term, and that may be said to be the rule, or rather the custom, at present, so far as a custom can really be said to exist. In troublous times the Council has been glad to re-appoint even more than once those who have proved themselves to be exceptionally successful holders of the post and Sir William Savory was President for four years. We are not aware whether the present President, Sir William Mac Cormac, would be willing to undertake the arduous duties of the post for yet another year, but we think the Council could hardly err in re-appointing for the centenary year one who has already fulfilled so satisfactorily the duties of the office. An important and difficult year is before the College. The centenary celebrations, the new Charter, and the question of granting to the Members a share in the government of their College require a President who will be able to guide the counsels of the College in the direction which will lead to the continued advancement of the institution and the mutual good feeling of its Council, Fellows, and Members.

SPECIAL MEETING OF FELLOWS AND MEMBERS.

A special meeting of Fellows and Members was summoned by the Council for Wednesday, July 5th, to consider the proposed application for a new Charter. The President, Sir William Mac Cormac, Bart., K.C.V.O., presided, and 76 Fellows and Members were present, including 12 members of the Council.

The PRESIDENT, in placing before the meeting the draft petition to the Crown for power to confer diplomas of honorary Fellowship and the Draft Charter embodying the powers asked for, mentioned that the meeting had been summoned in accordance with a resolution of the Council in 1885 in which it was agreed to call meetings of the Fellows and Members whenever it was proposed to make any change in the constitution of the College. This was the first occasion on which a meeting had been called under that resolution. He proceeded to explain the petition and pointed out that most universities and other similar institutions usually conferred honorary degrees on occasions such as the centenary of the College which would be celebrated next year. The College unfortunately did not possess any such power, and the proposed supplementary Charter was intended to confer that power on the Council. He expressed his opinion that the value of the diploma of honorary Fellowship would be materially lessened if the proposal met with any opposition; it was therefore, he thought, desirable that anything of a controversial character should be avoided in the new Charter, and for that reason the Council had decided to exclude several matters which deserved to be dealt with, such as the question of the fees payable at the examinations for the licence in Dental Surgery and at the examinations for the Fellowship which at present were conducted at a loss. He had no wish to interfere with the discussion on the motions on the agenda paper, but he would point out that it was necessary that the proposed new powers should be obtained with the least possible delay, and the introduction of any contentious matter would inevitably lead to delay. With regard to the proposed representation of Members he would point out that within two years the Fellows had voted against the resolution and he

concluded by expressing the hope that the motions would not be carried but be postponed.

Mr. JOSEPH SMITH moved the first resolution:

That this meeting of Fellows and Members, summoned by the Council to consider the terms of a proposed new Charter, is of opinion that the powers asked for are inadequate and that no Charter should be granted which does not give to the Members some representation on the Council.

He disclaimed any wish to disturb the harmony at present existing by the raising of any contentious matter, but he felt that no occasion could be more suitable than the present for urging on the Council the necessity for representation of the Members. He compared the situation to that at present existing in the Transvaal, explaining that the President corresponded to President Kruger, the Council to the Volksraad, and the Members to the Uitlanders. He hoped that even now the Council would arrange to include in the new Charter some scheme for the representation of the Members. Reform of the College must come ultimately in spite of all opposition.

Dr. MORTON, in seconding the motion, said that he was very loth to raise any controversial matter, especially after the President's speech, but he did not think that the Council could be surprised at the Members pressing the question. He felt sure that the extension of the franchise would strengthen the position of the Council. He would make an earnest appeal to the Council to introduce the representation of the Members nto the proposed Charter.

Sir ROBERT CRAVEN considered that the chief argument in favour of the Members was the want of knowledge which the Council had of the needs and circumstances of the general practitioner. He thought, however, that it would be well to postpone the matter.

Mr. GEORGE BROWN regretted that the Members could not accede to the suggestions of the President, for they must be consistent in their demand for representation.

Dr. HERBERT SNOW contended that the state of the College of Surgeons exercised an unhealthy influence on the whole of the medical world and that therefore reform was necessary.

Surgeon-Major INCE, although in favour of the Members possessing representation, thought that under the present circumstances the Members should postpone the motions.

Mr. PICKERING PICK pointed out that the Fellows would oppose any representation of the Members, even though the Council were in favour of it.

Dr. MORTON could not agree that there was not time to ascertain the opinion of the Fellows.

Mr. BARKER said that he had been 15 years a Member and he was sure that the Council did not understand the wants of the Members.

Mr. HORACE MANDERS expressed the opinion that most of the Fellows sympathised greatly with the Members, but he urged that any Member could become a Fellow if he chose to pass the examinations. He suggested that the Members should be allowed to elect to the Fellowship 25 Members who would then be able to vote for the election of members of the Council.

The CHAIRMAN then put the question to the vote and 40 voted Aye and eight No.

Mr. W. G. DICKINSON then moved:

That this meeting requests the Council to postpone a final decision as to the terms of the new Charter until a memorial which is in course of signature has been received and considered.

He explained the memorial which was published in THE LANCET of June 24th. Already several hundred signatures had been received although it had only been sent out two days ago. The opposition of the Fellows to which reference had been made was, he felt sure, due to the form in which the elucidatory statement had been drawn up. The Members could not withdraw now.

Dr. DANFORD THOMAS seconded and urged that the granting of representation to the Members would not take away anything from the Fellows. The memorial had been circulated only a short time and it would be presented to the Council as quickly as possible. In 1888 the memorial to the Privy Council had been signed by more than 5000 Members.

Mr. W. H. DAY asked the chairman whether the fact that Members abstained from petitioning against the Charter now would not prejudice their claims in the future, but Sir WILLIAM MACCORMAC did not think so.

Mr. HULL said that as at present constituted the Council could not appreciate the wants of Members as they did not know the difficulties and troubles of general practice.

Sir THOMAS SMITH explained that the opposition of the Fellows was shown by the large majority on each of the two occasions on which their votes had been taken and that nothing could be done until the Fellows voted in favour of giving Members representation.

Mr. GEORGE BROWN claimed that Fellows would vote in favour of the Members' demand if they were not told by the Council how they should vote.

Surgeon-Major INCE suggested that for the third time a vote of the Fellows should be taken.

When the resolution was put to the meeting it was carried, 38 voting in its favour and only one opposing it.

ELECTION OF MEMBERS OF THE COUNCIL.

The eleventh election of Fellows to fill the vacancies in the Council of the College under the new regulations was held at the College, Lincoln's-inn-fields, on Thursday, July 6th, between 1.30 P.M. and 4 P.M. The result of the voting was as follows:—

	Votes.	Plumpers.
MR. H. W. PAGE	286	85
MR. T. R. JESSOP	233	6
DR. WARD COUSINS	226	17
MR. JORDAN LLOYD	126	7

Mr. T. R. Jessop is therefore re-elected and Mr. H. W. Page elected a member of the Council.

493 Fellows voted, 16 personally and 477 through the post. Two proxies arrived too late and one voting paper was spoiled.

TIVERTON INFIRMARY.—The recent bazaar held in aid of the Tiverton Infirmary Building Fund after paying all expenses realised nearly £600.

MEDICAL MAGISTRATES.—The Lord Chancellor has appointed Mr. William Henry Netherclift, F.R.C.S. Edin., M.R.C.S. Eng., a justice of the peace for the borough and city of Canterbury, Kent.—Mr. George Merriman Hirons, L.R.C.P., L.R.C.S. Edin., of Granton, Boscombe, has been appointed a magistrate for the county borough of Bournemouth.

PRESENTATIONS TO MEDICAL MEN.—At the sixty-third annual meeting of the Lancashire and Cheshire Branch of the British Medical Association, held at the Town Hall, Bolton, on June 21st, Dr. C. Macfie, of that borough, presiding, Mr. James Barr, M.D. Glasg., M.R.C.P. Lond., of Liverpool, was the recipient of an address and an honorarium of 150 guineas for his past services as honorary secretary.—Mr. James Graham, M.A., M.D. Edin., of Liverpool-street, Sydney, New South Wales, was entertained at a banquet on May 5th by a number of his friends. Mr. Alderman Harris, M.P., the Mayor of Sydney, presided. The chief object of the meeting was to present Dr. Graham with a silver salver service subscribed for by some of his electors and friends as a token of appreciation of his many acts of kindness and his public services. The Mayor, in making the presentation, testified to the excellent characteristics of their guest in his dual capacity as an alderman of the city of Sydney and as a member of the Legislative Assembly of New South Wales.—Mr. Joseph J. Stapleton, M.D. Edin., M.R.C.S. Eng., of Lambton, New South Wales, on his leaving the district has been presented with an illuminated address and a purse of sovereigns. The occasion was quite representative of Lambton and the surrounding suburbs of the city of Newcastle.—At the St. Mary's, Everton Valley, Schools, Kirkdale, on June 28th, the Rev. Canon M. Lester, who presided, said that several members of the congregation had thought fit to mark the approaching marriage of the churchwarden, Mr. W. G. Moore, L.R.C.P. Edin., M.R.C.S. Eng., of Everton Valley, with some memento of his long connexion with the church, and he had great pleasure in wishing him happiness in the step which he was about to take, and of presenting him with a testimonial which consisted of a rose bowl, side dishes, and a salver, each inscribed with a monogram and the salver bearing an inscription.—At the Town Hall, Saltcoats, recently, in the presence of a large and representative assembly, Mr. Robert S. Kinnier, L.F.P.S. Glasg., was the recipient of a cheque for £250 and a silver salver, and a diamond brooch for Mrs. Kinnier, on the occasion of his completing 50 years as a medical practitioner in the burgh.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

The following gentlemen passed the Second Examination of the Board in the subjects indicated:—

Monday, July 3rd:

Anatomy and Physiology.—Frederick Joseph Stansfield and Christopher Wilfred Sharpley, Yorkshire College, Leeds; Vivian Gray Maitland, Mason University College, Birmingham; Stanley Riley, William Braddock, Thomas Richard Eames, Sandy Spencer, and Walter Stansfield, Owens College, Manchester; Vladimir Nikolaevitch Ouranofski, Anderson's College and St. Mungo's College, Glasgow, and University College, Liverpool; Richard Harvey Sankey, Oxford University; Charles Corfield, University College, Bristol; Fielding Charles Whitmore, Royal College of Surgeons School of Medicine, Dublin, Guy's Hospital, and University College, Bristol; Robert Pettigrew Kennedy, St. Mungo's College, Glasgow; John Woodruff Lewellyn, University College of South Wales, Cardiff; Edward Colston Williams, St. Bartholomew's Hospital; and Charles Herbert Gask, Guy's Hospital.

Anatomy only.—Francis John Russell, London Hospital; and Joseph Sharples, Cambridge University and St. Mary's Hospital.

Physiology only.—William Miles, St. Mary's, University College of South Wales, Cardiff, and Middlesex Hospital.

17 gentlemen were referred in both subjects, one in Anatomy only, and one in Physiology only.

Tuesday, July 4th:

Anatomy and Physiology.—Harold Edgar Atheling Jackson, Melbourne University; Shridor Bheekijee Gadgil, Grant Medical College, Bombay; Wilfred Parsons, University College, London; William Robertson, Otago University, Dunedin and University College, London; Francis Willan Jackson, Alister Cameron Young, Charles Russell Keed, and Charles Vere Nicoll, St. Bartholomew's Hospital; George Murray Levick, University College and St. Bartholomew's Hospital; Ivor Cadwaladyr Lewis, St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; Cuthbert Edmund Arnold Huddart, London Hospital and Mr. Cooke's School of Anatomy and Physiology; Hugh Rose Cran, London Hospital; Geoffrey Wallace Grainger Hughes, King's College, London; Warwick Alan George Stevens, Guy's Hospital; Robert Kennedy Grogan Graves, St. George's Hospital; David Bridges, Charing-cross Hospital.

20 gentlemen were referred in both subjects.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The following gentlemen having passed the necessary examinations have been admitted Licentiates in Dental Surgery:—

Edward Faulkner Ackery, Charing-cross and the Dental Hospital of London; Henry David Apperly, Middlesex and the Dental Hospital of London; John Robert Slade Ash, Guy's Hospital Dental Department and School; Liston Wheatley Bennett, Middlesex and the National Dental Hospital; Alfred Harold Bowkley, University College, Royal Infirmary, and Dental Hospital, Liverpool; Robert Victor Britten, Edward Cardwell, and Harry Whitmore Cutts, Charing-cross and the Dental Hospital of London; Percy Ernest Chandler, Guy's Hospital Dental Department and School; Samuel Sydney Doran, University College, Royal Infirmary, and Dental Hospital, Liverpool; Frederick English, Mason College, Queen's, General, and the Dental Hospital, Birmingham; Harold Arthur Thomas Fairbank, M.R.C.S. Eng., L.R.C.P. Lond., Charing-cross and Dental Hospital of London; Emmanuel Bower Marshall Frost and Archibald James Gwatkin, Guy's Hospital Dental Department and School; John Walton Gibbons, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; Edward J. Fabian Gillemand, Charing-cross and Dental Hospital of London; Robert William Griffin and Cyril Henry Howkins, Mason College, Queen's, General, and Dental Hospitals, Birmingham; Alfred David Hopkins, Ernest Robert Howlett, and Arthur Hughes, Guy's Hospital Dental Department and School; Harold Samuel Huggins and John D. Dawson Humby, Middlesex and National Dental Hospitals; Alfred de Betham Jepson, Charing-cross and Dental Hospital of London; Sydney James Kaye, Middlesex and Dental Hospital of London; John Mahoney, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; De la Hay Moores, University College, Royal Infirmary, and Dental Hospital, Liverpool; Major Percival Nathan, Stephen Holloway Olver, John Gerdes McAlpin, Herbert William Morris, and Percival H. Hayes Palmer, Guy's Hospital Dental Department and School; Frank Parlett, University College, Royal Infirmary and General Hospital Dental Department, Bristol; William de Courcy Prideaux and Herbert Quinton, Charing-cross and Dental Hospital of London; Thomas Edward Regan, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; Alfred Ernest Rowlett and Thomas Francis Ryan, Guy's Hospital Dental Department and School; Richard John Russell, University College, Royal Infirmary, and Dental Hospital, Liverpool; Frank Lyon Shelton and Ernest Shrubsole, Charing-cross and Dental Hospital of London; Sydney Colvin Smith, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A. Lond., Middlesex and Dental Hospital of London; Lionel Taylor, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; Edgar Preston Uttley, Frank Warlow, Eustace B. Lathbury White, John Albert Whittington, and Charles Frederick Witcomb, Guy's Hospital Dental Department and School; Thomas Herbert Vaughan and Herbert Gill Williams, Charing-cross and Dental Hospital of London.

28 gentlemen were referred to their professional studies for six months and one for one year.

UNIVERSITY OF CAMBRIDGE.

At the examinations for medical and surgical degrees, Easter term, the following candidates were successful:—

THIRD EXAMINATION.

Part I.—R. G. Abercrombie, B.A., Caius; W. L. Ascherson, non-collegiate; F. A. Bainbridge, B.A., Trinity; H. P. Bradley, B.A., Caius; W. P. S. Branson, B.A., Trinity; W. E. Burnand, Jesus; J. P. Candler, B.A., Corpus Christi; A. E. Carver, M.A., and H. Edmondson, B.A., Clare; H. St. C. Elliott, Trinity; F. H. Ellis, B.A., Caius; F. C. Eve, B.A., Emmanuel; L. S. Gaskell, M.A., Christ's; T. Gillespie, B.A., St. John's; D. G. Hall, B.A., Emmanuel; R. W. Hedley, M.A., King's; A. Killick, B.A., Downing; J. E. Linnell, B.A., H. Selwyn; T. Manners-Smith, M.A., Downing; H. N. Matthews, B.A., St. John's; W. H. Maxwell, B.A., Trinity; J. A. Nixon, B.A., Caius; S. V. Pearson, B.A., Emmanuel; A. C. Pearson, B.A., Sidney Sussex; J. H. Philbrick, B.A., Trinity; J. G. Taylor, B.A., King's; B. R. B. Truman, B.A., Trinity Hall; R. A. Walker, B.A., Clare; R. F. C. Ward, B.A., St. John's; D. P. Watson, B.A., Trinity; L. Wilkin, M.A., Pembroke; and W. M. Willoughby, B.A., Caius.

Part II.—H. F. Bassano, M.A., Trinity; G. Browse, M.A., Clare; H. N. Clarke, B.A., Trinity; S. E. Dore, B.A., St. John's; F. H. Ellis, B.A., Caius; J. H. Fryer, B.A., Christ's; H. A. Gaitskell, M.A., Clare; J. R. Garrood, B.A., St. John's; K. R. Hay, B.A., Caius; J. E. Helm, B.A., Magdalene; R. J. Horton-Smith, M.A., St. John's; E. R. Hunt, B.A., Trinity; J. H. Kemp, B.A., E. K. Le Fleming, B.A., and T. A. Mayo, B.A., Clare; H. P. Parker, B.A., Emmanuel; S. B. Reid, M.A., and F. A. Rose, St. John's; C. D. Somers, M.A., Pembroke; F. G. Stacey, B.A., F. W. Sumner, B.A., and J. H. Tallent, B.A., St. John's.

UNIVERSITY OF EDINBURGH.

The following have passed the final professional examination for degrees in medicine and surgery:—

Old Regulations.—John Brown, D. B. B. Hughes, Elsie M. Ingles, D. J. M'Adam, Marion B. Marshall, I. J. van der Marwe, A. L. Owen, Esther M. Stuart, Emily C. Thomson, Addie White.

New Regulations.—Ivie Aird, Tina M'Culloch Alexander (with distinction), W. J. Baird, C. A. J. A. Balck, W. J. Barclay, B.A. (with distinction), F. A. F. Barnardo, M.A., E. F. Bashford, J. G. Bell, P. J. Bodington, A. H. W. Boreham, G. A. Brogden, W. J. D. Bromley, E. A. Brown, G. H. J. Brown, Robert Bruce, J. M. Buist, D. A. Callender, H. G. Carlisle, J. C. Carr, Morden Carthew, Lilian Mary Chesney, C. S. Clark, H. E. Coghlan, W. J. Collinson, J. D. Comrie, M.A., B.Sc. (with distinction), B. J. Courtney, R. M. Dalziel, William Darling, M.A., S. M. Dawkins, Y. A. Djedjizian, B.A., David Ewart, William Ewart, W. R. Eyton-Williams (with distinction), R. R. Fasson, H. Faulkner, David Ferrier, E. G. Ford, A. R. Fordyce, J. J. Galbraith, A. B. George, M.A., H. A. H. Gilmer, B. K. Goldsmith, J. H. Gordon, T. B. Gornall, F. J. Gray, St. L. H. Gribben, A. H. Griffeth, George Haddow, P. W. Hampton, F. J. Hathaway, G. G. Hay, A. C. Heath, P. H. Henderson, W. E. Herbert, I. K. Hermon, H. T. Holland (with distinction), A. M. Holmes, James Husband, Alice M. Hutchison, J. G. Jack (with distinction), W. T. James, R. F. Jardin, John Jeffrey, W. J. Jones, J. W. Kerr, D. B. King, M.A., G. D. Laing, L. S. Lessing, T. H. Livingstone, E. A. Loch, J. L. Louis, James Luckhoff, George Lyon (with distinction), Elizabeth G. Macdonald (with distinction), J. M. Macdonald, M.A., P. H. Macdonald, P. N. M. Macdonald, W. J. M'Farlan, John Macgregor, Robina Macgregor, W. M. Mackay, Maxwell MacKelvie, H. M. Mackenzie, T. C. Mackenzie, P. A. Maclagan, L. C. Maclagan-Wedderburn, T. D. MacLaren, G. C. M'Leavy, L. W. Macpherson, A. G. Martin, E. W. Martin, J. F. Martin, Ruth Massey, James Masson, M.A., B.Sc. (with distinction), J. W. Mathewson, B.Sc., E. T. Melhuish, E. G. D. Menzies, F. N. Menzies, G. H. Menzies, M.A., James Miller, B.Sc. (with distinction), J. G. Mitchell, H. A. D. Moore, J. R. Munro, J. A. Murray, B.Sc., W. A. Murray, B.A., A. W. Nankervis, A. C. Neethling, T. P. Oates, James Orr, T. S. Orr, William Park, M.A., F. M. Parry, W. M. Paul, M.A., A. S. M. Peebles, E. J. Peill, Arthur Preston (with distinction), T. A. Price, R. N. Pringle, S. C. Pritchard, J. M. Reid, William Reid, M.A., C. M. Robertson, Thomas Rogerson, R. M. Rowe, M.A. (with distinction), A. B. Shed, Sutherland Simpson, B.Sc., A. B. Slater, V. E. Sorapure, Stephen Southall, H. B. Sprost, Bernard Stracey, W. J. Stuart, M.A. (with distinction), W. W. Thom, G. N. W. Thomas, J. A. Thompson, W. G. Thompson, George Thomson, R. G. Thomson, A. K. Traill, R. B. Turnbull, Alexander Tweedie, C. S. Vartan, N. D. Walker, C. Heron Watson, M.A., C. H. J. Watson (with distinction), Arthur Whittome, Angus Whyte, A. S. Whytock, M.A., H. D. Wilson, A. H. Wood, and E. M. Young.

UNIVERSITY OF BRUSSELS.

At the June examination the following British practitioners satisfied the examiners and received the degree of M.D. There were 17 candidates:—

S. F. O. Dickins, Cowfield, Sussex; F. C. Fosbery, Bath; Maud Langley, India; N. Lavers, London; F. Lloyd, Accrington; S. Melville, London; H. Rubra, London; and J. T. Simpson, Farnborough.

ROYAL INSTITUTE OF PUBLIC HEALTH.

The Congress of the Royal Institute of Public Health will be held in Blackpool from Sept. 21st to Sept. 26th inclusive under the presidency of the Marquis of Lorne. The Congress will be arranged in the following sections—(*a*) Preventive Medicine and Vital Statistics (president, Dr. E. W. Hope); (*b*) Chemistry and Meteorology (president, Mr. A. E. Fletcher); (*c*) Engineering and Building Construction; and (*d*) Municipal and Parliamentary (president, Mr. T. Loftos). Conferences will take place of—(*a*) Medical Officers of Health

(president, Dr. Sergeant); (*b*) Veterinary Surgeons (president, Professor Penberthy); (*c*) Sanitary Inspectors (Mr. Vacher); (*d*) Port Sanitary Authorities (Dr. E. W. Hope); and (*e*) Ladies on Domestic Hygiene. In the Preventive Medicine Section there will be discussions on—(1) the Serum Diagnosis of Enteric Fever (introduced by Professor Delépine); (2) the Advantages of Medical Inspection of Scholars in Elementary Schools (by Dr. Arnold W. W. Lea); (3) the Etiology and Prevention of Diarrhœa; (4) the Influence of Personal Hygiene and General Sanitation on Tuberculosis in Man; and (5) the Housing of the Industrial Working Classes. In the Chemistry and Meteorology Section discussions have been arranged on—(1) Smoke Prevention; (2) Disposal of Sewage; and (3) Meteorological Returns from Health Resorts. In the Engineering and Building Construction Section a discussion will be held on the Statutory Registration of Architects (introduced by Mr. C. McArthur Butler). In the Municipal and Parliamentary Section the following papers have been promised—(1) Cremation (by Mr. J. Harvey Simpson); (2) a paper by Mr. Geo. Harwood; (3) Municipal Loans and Rating (by Mr. J. Beckett); (4) Unification of Rating (by Mr. W. J. Jeeves); and (5) the Law as to Sanitary Conveniences (by Mr. G. W. Bailey). In the Conference of Medical Officers of Health it has been decided to have discussions on—(1) the Notification of Measles (introduced by Mr. Berry, medical officer of health of Wigan); (2) the Notification of Phthisis; (3) the Provision of Isolation Hospitals; (4) the Control of Milk Supplies; (5) the Protection of Water Supplies; and (6) Administrative Uses of Bacteriology (introduced by Dr. Meredith Young, medical officer of health of Crewe). In the Conference of Sanitary Inspectors the following papers have already been promised:—(1) Anomalies of Public Health Law (by Mr. J. A. Priestly Nelson); (2) Tenure of Office of Sanitary Inspectors (by Mr. E. Worrall); and (3) House Drainage and Inspection (by Mr. H. C. Bascombe). In the Conference of Ladies on Domestic Hygiene there will be discussions on (1) District and Cottage Nursing; (2) Cycling in its Relation to Health; (3) Physical Training a National Necessity; (4) the Inclusion of the Teaching of Hygiene in the Education Code; (5) the Treatment of Consumption in Sanatoria; and (6) the Care of Feeble-minded Persons. The Conference of Veterinary Surgeons will be devoted to the discussion of Measures to be Taken for the Prevention of Tuberculosis in the Lower Animals and its Spread therefrom to Human Beings; and also to the consideration of any papers on other subjects which may be promised.

BRITISH MEDICAL ASSOCIATION.—The forty-fourth annual meeting of the South Midland Branch of the British Medical Association was held at Kettering on June 30th, when the president elect, Dr. John Allison, delivered an address, taking as its basis a verse from the Old Testament (Deut. xii., 23): "Only be sure that thou eat not the blood: for the blood is the life; and thou mayest not eat the life with the flesh." Mr. W. Watson Cheyne then gave an address on Surgical Tuberculous Disease, with lantern demonstration. The meeting closed with the usual votes of thanks.—At the annual meeting of the South Wales and Monmouthshire Branch of the British Medical Association held at Swansea on June 29th Mr. W. W. Leigh was installed president for the year and Dr. A. Garrod Thomas was appointed president elect. Mr. Leigh in his presidential address urged the appointment of a Direct Representative for Wales upon the General Medical Council. The members of the branch voted the sum of 10 guineas from their funds to the Royal Medical Benevolent College at Epsom.—The sixty-third annual meeting of the Lancashire and Cheshire Branch of the British Medical Association was held at Bolton on June 21st. The members assembled at the Town-hall at noon where they were received by the Mayor (Alderman Nicholson), who was accompanied by the President (Mr. W. Berry), the president elect (Dr. Macfie), the honorary secretary (Dr. J. Barr), and the honorary local secretary (Dr. J. Robinson). Subsequently they were entertained at luncheon in the Mayor's dining-room by the members residing in Bolton and the neighbourhood. At 2 P.M. the general meeting took place in the Borough Court and was attended by about 140 members from various parts of Lancashire and Cheshire. The chair was taken by the retiring president, Mr. Berry of Wigan. In the evening about 70 members sat down to dinner in the Conservative Club. Dr. Charles Macfie, the new President, occupied the chair. After the usual loyal toasts had been honoured, "The Clergy" was proposed by the president and responded to by the Vicar of Bolton (Rev. E. Hoskyns). Sir W. M. Banks proposed "The Lancashire and Cheshire Branch of the British Medical Association" which was responded to by Dr. Barr, who gave interesting historical reminiscences in connexion with the branch. Votes of thanks were passed to the retiring president and the officers. The meeting recorded its appreciation of the attitude of Mr. T. P. O'Connor and Mr. W. J. Galloway in Parliament towards the Midwives Bill and its disapproval of certain remarks made by Sir W. Priestley upon the same matter.

EXETER HOSPITAL SATURDAY FUND.—A meeting of the general committee of the Exeter Hospital Saturday Fund was held on June 24th, when £791, being the collection received in 1898, were distributed among the various medical charities. It was decided that August 26th should be observed in Exeter as Hospital Saturday, when it is hoped that a sum of £1000 will be raised.

BERI-BERI AT FALMOUTH.—Dr. W. King Bullmore in his annual report to the Falmouth and Truro Port Sanitary Authority states that in the Royal Cornwall Sailors' Home during 1898 there had been 55 patients treated, of whom 12 were suffering from beri-beri, 10 from scurvy, and 12 from injuries. Four deaths had occurred—one from beri-beri, one from phthisis, one from scurvy, and one from delirium tremens.

THE ROYAL INSTITUTION.—At a general monthly meeting it was reported that the centenary celebrations had not affected the pecuniary resources of the Royal Institution as all expenses in connexion therewith had been defrayed by private contributions. A balance remaining over of the sums contributed amounting to £87 has been paid over to the Fund for the Promotion of Experimental Research.

SKIN-GRAFTING IN A WORKHOUSE.—At the meeting of the St. Austell Board of Guardians held on June 30th a letter was read from the Local Government Board with reference to the skin-grafting operation performed by the medical officer of the workhouse and commented on in THE LANCET of June 3rd (p. 1505). The communication stated that the operation should not have been performed without the sanction of the guardians and requested that the medical officer should be cautioned as to this for the future. After some discussion the guardians passed a resolution requesting the Local Government Board to call on the Rev. B. Waugh for an explanation of the complaint made by him as to the taking of the grafts.

DIPHTHERIA IN LONDON.—The sixth four-weekly period of the current registration year, that period having ended on Saturday, June 17th, showed an increase in the amount of notified diphtheria in London over the like period of time ended on May 20th, while the number of deaths from the disease was almost identical in both periods. The 820 notified cases of diphtheria in the May period gave place to a total of 904 in the later period, the respective weekly averages being 205 and 226 cases. All districts save two were invaded in the May period, and four sanitary areas had each upwards of 50 notified cases, with an aggregate of 235. All save one of the sanitary areas were invaded in the June period but only three districts had each over 50 notified cases, with 208 in all. Other four invaded districts had only nine cases amongst them, and still other 15 areas had only 109 cases amongst them, or an average of seven cases each, the number of separate sanitary districts in the county of London being 43. Thus, in the remaining 21 districts—i.e., those not finding place in the analysis just differentially presented—there was an average of 27 cases, or one each per diem. In the matter of mortality the 111 deaths, or 28 on the average weekly, in the May period gave place to 110 deaths from diphtheria in the June period, the May total being 35 less than the aggregate of the corrected decennial averages for the several weeks of the years 1889–98, and the June total being 40 less than such aggregate. Thus, the totals of the successive weeks in the June period were 23, 24, 28, and 35 (showing a tendency to increase), while the corrected decennial averages were 37, 35, 35, and 43 respectively. The case mortality of the two periods was 13·5 per cent. in May and 12·17 in June. In the Outer Circle the 40 deaths of the earlier period were succeeded by 45 in June, and the 23 deaths in the one registration district of West Ham by 22 deaths.

LITERARY INTELLIGENCE.—Messrs. Smith, Elder, and Co. have in preparation and will publish early in the autumn a work which will, it is hoped, supply a need. It is a medical handbook for travellers with the title "Health Abroad" and it is edited by Dr. Edmund Hobhouse. Special articles are contributed to it on Egypt and North Africa, by Dr. Leigh Canney; Central Africa, by Dr. Harford-Battersby; Continental Travel, by Dr. Stuart Tidey and the editor; South Africa, by Dr. B. J. Guillemard; South America, by Dr. G. H. Pennell; India, by Dr. W. J. Simpson; and Australia, New Zealand, and North America, by the editor.—Messrs. John Bale, Sons, and Danielsson, Limited, are publishing next week a volume, "Tales of Medical Students," from the pen of Dr. Ralph Hodgson of Sydney, New South Wales.

Parliamentary Intelligence.

HOUSE OF COMMONS.

THURSDAY, JUNE 29TH.

Lead Poisoning.

SIR CHARLES DILKE asked the Home Secretary whether his attention had been called to the report of an inquest on a lead-poisoning case held at Hanley on June 21st and to the remarks of the coroner stating that an application from the Manufacturers' Association had reached him through the Home Secretary who suggested that he should allow the Manufacturers' Association to be represented at every inquest where lead poisoning was alleged, and to the coroner's dissent from the recognition of any such association as being in any way a party interested in individual cases; whether the coroner had declared his intention of himself calling in a medical man in every such case to make a post-mortem examination and give evidence without necessarily requiring the attendance of the doctor acquainted with the past history of the case who had given the death certificate? whether the post-mortem examination in the recent case was a mere naked eye examination? and whether he would use his influence with the coroner to cause chemical analysis of the organs in any such post-mortem examination.—Sir MATTHEW WHITE RIDLEY: I have made inquiry regarding the case mentioned and I learn from the coroner that while he objects to recognising the Manufacturers' Association he is quite willing to allow the secretary of the association to appear on behalf of any manufacturer who desires to be so represented. This seems to me a satisfactory arrangement. The coroner further informs me that he proposes to call in an independent medical man in every case of suspected lead poisoning to make a thorough post-mortem examination, and where necessary to obtain also a chemical analysis. I understand that in the present case he considered such analysis unnecessary. These are points within the coroner's discretion.

Small-pox at Hull.

Mr. R. G. WEBSTER asked the President of the Local Government Board whether the small-pox epidemic was increasing at Hull; and if there were also more cases of that disease notified at Grimsby.—Mr. T. W. RUSSELL, for Mr. Chaplin, said: I regret to say that there has lately been an increase of small-pox in Hull. Between March 2nd and June 15th there were 61 attacks and since June 15th 22 more cases have been notified. All the known cases at present existing are in the isolation hospital. A person suffering from small-pox landed at Grimsby on June 21st from a ship which had left Hull on the 19th. The patient was at once removed to the hospital and no other case has since been reported.

Glycerinated Calf Lymph for Ireland.

Sir THOMAS ESMONDE asked the Chief Secretary to the Lord Lieutenant of Ireland what steps were being taken in accordance with the recommendation of the Royal Commission on Vaccination to supply calf lymph to the public vaccinators in Ireland.—Mr. GERALD BALFOUR: Steps were taken in the first instance to ascertain whether Dr. Blaxall, the bacteriologist of the English Local Government Board, would be willing to make arrangements for providing a supply of glycerinated calf lymph for Ireland. I understand, however, that Dr. Blaxall cannot undertake to supply to Ireland the quantity required and it is now proposed to equip a bacteriological laboratory in Ireland for the purpose.

FRIDAY, JUNE 30TH.

The Protection of Water-supplies.

Mr. THOMAS BAYLEY asked the President of the Local Government Board whether he saw a reasonable prospect of making progress with a Bill for the greater protection of water-supplies so as to give more extensive powers to local authorities to deal with the water-supply of the districts under their control and whether he could see his way to bring in a Government Bill making the county councils (with the exception of the London County Council which already had such powers) the water authority of their respective districts.—Mr. CHAPLIN: I cannot say, having regard to the present state of public business, that the prospect of being able to make progress with the Bill referred to is very promising. As regards the second paragraph of the question it is not proposed that the county councils should be made water authorities. The urban and rural district councils are the water authorities for their respective districts.

Small-pox at Hull.

Mr. R. G. WEBSTER asked the President of the Local Government Board whether he was in a position to state the number of patients during the present epidemic of small-pox at Hull who were vaccinated and the number of those who were unvaccinated, and also the percentage of deaths of those who were vaccinated and unvaccinated respectively.—Mr. CHAPLIN: Of the 83 cases of small-pox at Hull as to which the Local Government Board have information 62 cases showed evidence on examination of having been vaccinated and 21 appeared to have been unvaccinated. The rate of death amongst patients exhibiting evidence of vaccination has been 9·7 per cent., whilst amongst those exhibiting no evidence of vaccination it has been 57·1 per cent.

Venereal Disease in India.

Mr. JAMES STUART asked the Secretary of State for India if he would lay upon the table a copy of the circular issued from Simla on June 18th, 1898, for the purpose of ascertaining from the various medical schools whether female hospital assistants could be obtained to engage in the examination of prostitutes in India; and if he would state the result of the inquiry, how many of such hospital assistants had consented to perform these examinations, and on what terms they had been engaged.—Lord GEORGE HAMILTON: I have seen no copy of the circular in question, but I will make inquiries on the subject.

MONDAY, JULY 3RD.

Vaccination Proceedings.

Mr. LOGAN asked the President of the Local Government Board if it was intended by his department that the public vaccinator's visit and offer to vaccinate, under Section 1, sub-section (3) of the Vaccination Act, 1898, should take the place of the opportunity afforded by the vaccination stations now abolished, and such visit and offer to vaccinate be made before any proceedings were instituted against persons who became defaulters since Jan. 1st, 1899.—Mr. T. W. RUSSELL (for Mr. Chaplin) said: I am advised that in the case of any child who has attained the age of six months since Dec. 31st last, the public vaccinator must visit and offer to vaccinate before any proceedings are instituted in respect of the non-vaccination of the child.

TUESDAY, JULY 4TH.

The Administration of Haslar Hospital.

Captain NORTON asked the First Lord of the Admiralty whether a deputy inspector-general had recently been appointed in charge of the Royal Hospital at Haslar instead of an inspector-general though there were three officers of the latter rank available for service at Haslar; and, if such appointment had been made, would he explain why the three inspector-generals had been passed over.—Mr. GOSCHEN: Yes, sir. The facts are as stated. The reason for my choice is that I was determined to select the best man I could find, irrespectively of seniority or etiquette, for the administration of the great naval hospital at Haslar, which I regard as one of the most important hospitals in the kingdom and for the efficiency of which I am responsible.

WEDNESDAY, JULY 5TH.

The Manufacture of Cider.

In anticipation of the report stage of the Sale of Food and Drugs Bill, Mr. STRACHEY has prepared a new clause providing that it shall be unlawful to sell or import for sale any liquid under the name of cider unless made from the juice of apples only.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BATTEN, R. W., M.D. Lond., F.R.C.P., was on his retirement appointed Consulting Physician to the General Infirmary at Gloucester and the Gloucestershire Eye Institution.

BUCHER, J. HOWARD, has been appointed *pro tem.* Medical Officer and Public Vaccinator for the No. 2 District of the Bodmin Union, vice F. G. Stewart, resigned.

FORSTER, FREDK. C., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Royal United Hospital, Bath.

FOSTER, P., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Resident Medical Officer to the Royal National Hospital for Consumption, Ventnor, Isle of Wight.

GRIFFITH, A., M.D. Lond., M.D. (State Med.), has been appointed Medical Officer of Health for the Borough of Hove.

HAIGH, HAROLD, M.A. Cantab., M.R.C.S., L.R.C.P., has been appointed Medical Officer to the Convalescent Home, Meltham Mills, near Huddersfield, vice T. A. Haigh resigned.

HANLY, JOHN JOSEPH, M.A.R.U.I., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Second District of the Shepton Mallet Union.

HARRIS, H. ELWIN, B.A., M.B. Cantab., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Surgeon to Out-patients at the Bristol Royal Hospital for Sick Children and Women, vice C. Wintle, resigned.

HUTCHINSON, F. A. S., L.R.C.P. Lond., M.R.C.S., has been appointed *pro tem.* Medical Officer and Public Vaccinator by the Dunmow Board of Guardians, vice R. C. Lyle.

LUCK, RICHARD HARMAN, M.A., M.B., F.R.C.S., has been appointed Honorary Surgeon to the Derbyshire Royal Infirmary.

MACKAY, J. D., M.B., C.M. Edin., has been re-appointed Medical Officer of Health by the Knaresborough District Council.

MARKBY, HERBERT, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Chester General Infirmary.

MARTIN, F. W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health for the Brighouse Borough.

MORGAN, D. NAUNTON, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the new district of Gilfach Goch by the Bridgend Board of Guardians.

PARSONS, GEO. G., L.R.C.P. Lond., M.R.C.S., has been appointed Public Vaccinator for Steeple, Ashton, vice G. G. Taylor, resigned.

ROBERTSON, WILLIAM, M.D. Glasg., D.P.H., has been appointed Medical Officer of Health for the Burgh of Paisley.

SALT, A. H. D., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of the Workhouse by the Blean Board of Guardians.

SMITH, COLVIN, Surgeon-General, C.B., M.D. Aberd., late Indian Medical service, has been appointed Honorary Surgeon to the Queen, vice Surgeon-General Maclean, C.B., deceased.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

BOROUGH ASYLUM, Portsmouth.—Junior Assistant Medical Officer. Salary £100, with board, lodging, and washing.

BRADFORD ROYAL INFIRMARY.—Junior House Surgeon, unmarried. Salary £50 per annum, with board and residence. Also Dispensary Surgeon, unmarried. Salary £100 per annum, with board and residence.

BRIGHTON, HOVE, AND PRESTON DISPENSARY (WESTERN BRANCH AND COTTAGE HOSPITAL), Queen's-road, Brighton.—House Surgeon. Salary £120 per annum, with board and residence.

BRIGHTON THROAT AND EAR HOSPITAL, Church-street, Queen's-road.—Non-Resident House Surgeon for six months. Salary at the rate of £75 per annum. Applications to Mr. R. W. Pilbeam, 10, Black Lion-street, Brighton.

CARDIFF INFIRMARY.—Assistant House Physician for six months. Salary at the rate of £50 per annum, with board, washing, and apartments.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon, board and residence provided in the Hospital.

CHESTER CENTRAL INFIRMARY.—Visiting Surgeon for two years. Salary £80 per annum, with residence and maintenance in the house.

CHICHESTER INFIRMARY.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

COUNTY ASYLUM, Prestwich, Manchester.—Junior Assistant Medical Officer, unmarried. Salary commences at £125 per annum, increasing to £250 by successive increments of £25, with apartments, board, attendance, and washing.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Assistant House Surgeon for twelve months. Salary £40 per annum, with board, residence, and washing.

DURHAM COUNTY HOSPITAL, Durham.—House Surgeon for one year. Salary £100 per annum, and board and lodging.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Junior Resident Medical Officer and Registrar. Salary £50, with board and washing.

FISHERTON ASYLUM.—Assistant Medical Officer. Salary £120 per annum to commence, with board, lodging, and washing. Apply to Dr. Finch, The Asylum, Salisbury.

GOVAN DISTRICT ASYLUM, Crookston, near Paisley, N.B.—Junior Assistant Medical Officer. Salary £100 a year, with furnished rooms, board, laundry, and attendance.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—House Surgeon for six months. Salary at the rate of £60 per annum, Board, lodging, and washing provided in the hospital.

GREAT YARMOUTH HOSPITAL.—House Surgeon. Salary £90 per annum, with board and lodging. Wines, spirits, beer, &c., not found.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Surgeon for six months, unmarried. Salary £20, with board and residence in the hospital.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £85, with board and residence.

LIVERPOOL DISPENSARIES, 34, Moorfields, Liverpool.—Assistant Surgeon, unmarried. Salary £100 per annum, with board and residence.

LONDON COUNTY ASYLUM, Bexley, Kent.—Assistant Medical Officer (male). Salary £150 per annum, with board, furnished apartments, and washing. Applications to the Clerk, Asylums Committee, 6, Waterloo-place, London.

LUNATIC HOSPITAL, The Coppice, Nottingham.—Assistant Medical Officer, unmarried. Salary £150 a year, with apartments, board, attendance, and washing.

OLDHAM INFIRMARY.—Senior House Surgeon. Salary £85 per annum. Also Junior House Surgeon. Salary £70 per annum, with board, washing, and residence in each case. Appointment for one year.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar.—Assistant and Second Assistant House Surgeons. Salary each £65 per annum, with board and residence.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY, AND THE GENERAL HOSPITAL AND SEAMEN'S INFIRMARY.—Resident Medical Officer, unmarried. Salary £100 per annum, with furnished apartments, board, and attendance. £10 allowed as substitute during annual holiday.

ROCHDALE INFIRMARY AND DISPENSARY.—House Surgeon, unmarried. Salary £90 per annum, with board, residence, and washing.

ROXBURGH DISTRICT ASYLUM, Melrose.—Assistant Medical Officer. Salary £100 per annum, with furnished quarters, board, washing, and attendance.

ROYAL CORNWALL INFIRMARY, Truro.—House Surgeon, unmarried. Salary £120, with furnished apartments, fire, light, and attendance.

ROYAL ISLE OF WIGHT INFIRMARY AND COUNTY HOSPITAL, Ryde.—House Surgeon. Salary £50 per annum, with a fee of £10 10s. for lecturing to the nurses.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

ST. PANCRAS AND NORTHERN DISPENSARY, Euston-road, London.—Resident Medical Officer, unmarried. Salary £105, with residence and attendance. Applications to the Hon. Sec., 23, Gordon-street, Gordon-square.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL, Albert-embankment, London.—Lecturer on Physiology.

SCHOOL BOARD FOR LONDON, Victoria Embankment, W.C.—Evening Continuation Schools. Lectures in First Aid and Home Nursing. Qualified Medical Practitioners. Fee, Six Guineas for a course of Twelve Lectures.

SEAMEN'S HOSPITAL SOCIETY, Greenwich, S.E.—Physician to In-patients and a Physician to Out-patients at the Branch Hospital in the Royal Victoria and Albert Docks, E.

STRATTON UNION.—District Medical Officer, South District. Salary £52 per annum, including travelling expenses. Appointment subject to statutory deductions. Applications to the Clerk to the Guardians, Stratton Union, Cornwall.

UNIVERSITY COLLEGE, London.—Jodrell Professor of Physiology.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

WEST SUSSEX COUNTY ASYLUM, Chichester.—Junior Assistant Medical Officer, unmarried. Salary commences at £100 per annum, with furnished apartments, board, attendances, and washing.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon for six months. Terms £70 per annum, with rooms, board, and washing.

Births, Marriages, and Deaths.

BIRTHS.

CARR.—On June 30th, at 19, Cavendish-place, W., the wife of J. Walter Carr, M.D., M.R.C.P., of a daughter.

CASTLE.—On June 27th, at Holly House, Darfield, the wife of R. Feild Castle, M.B., of a daughter.

FLOYD.—On July 2nd, at Devonshire-road, Birkenhead, the wife of W. R. Floyd, M.B., B.C. Cantab., of a son.

GAMAN.—On June 30th, at Caistor, Lincolnshire, the wife of F. R. S. Gaman, M.R.C.S., of a daughter.

GOURLAY.—On June 30th, at Faringcote, Pewley-hill, Guildford, the wife of F. T. Gourlay, M.B., C.M. Edin., of a son.

HUGO.—On July 1st, at Woodcote Lodge, Purley, Surrey, the wife of R. M. Hugo, L.R.C.S., L.R.C.P.I., of a son.

JEFFREE.—On July 3rd, at Clapton-square, N.E., the wife of Frank Jeffree, M.B., of a son.

NEWINGTON.—On June 27th, at The Grange, Edenbridge, Kent, the wife of Charles W. H. Newington, M.R.C.S., L.R.C.P., of a son.

OWEN.—On June 4th, at Enkeldoorn, Rhodesia, S. Africa, the wife of Arthur Dunley Owen, District Surgeon, Enkeldoorn, and Medical Officer, B.S.A. Police, of a son.

STIVENS.—On June 28th, at Park-street, Grosvenor-square, the wife of B. Lyne Stivens, M.D., of a daughter.

MARRIAGES.

COLCLOUGH—JAMES.—On June 28th, at St. Andrew's Church, Broadhembury, near Honiton, Devon, by the Rev. Charles Lister James, M.A., vicar of the parish, brother of the bride, W. Frank Colclough, B.A., M.B., B.C. Cantab, &c., Medical Officer to the British Hospital, Oporto, eldest son of Wm. Colclough, Esq., of 103, Central Hill, Upper Norwood, and formerly of Honor Oak, S.E., to Florence Irene, fourth daughter of the late W. Rhodes James, Esq., of Pinhoe, near Exeter.

FOULDS-FOSTER.—On June 21st, at the parish church, Feckenham, by the Rev. W. Manning, M.A., vicar of St. Andrew's, Leytonstone, assisted by the Rev. A. Marshall, M.A., vicar of Feckenham, and the Rev. W. J. Holden, M.A., rector of Kington, Francis Henry Foulds, M.R.C.S., L.R.C.P. Lond., second son of the late Dr. S. Foulds, of Chesterfield, to Greta Maryanne, only surviving child of Mrs. and the late E. W. Webb Foster, of Feckenham, Worcestershire.

LAMBERT—SLATTERY.—On June 26th, at St. Mary of the Angels', Bayswater, Francis Ernest Lambert, L.D.S., M.C.S. Eng., of Brighton, to Gertrude Louise, only daughter of the late John Vincent Slattery, of South Kensington, London.

PITT—RICE.—On July 28th, at Holy Trinity Church, Stratford-on-Avon, by the Rev. Frank Smith, M.A., assisted by the Rev. C. H. Rice, B.D., and the Rev. R. W. Pitt, M.A., Richard Joseph Pitt, L.F.P.S.G., son of Richard Pitt, of Wellesbourne, Warwick, to Mary, second daughter of the late Bernard Rice, M.B., of Stratford-on-Avon.

SARJEANT—KEKWICK.—On June 28th, at St. Mary's, Islington, John Frederick Sarjeant, L.R.C.P., M.R.C.S., eldest son of John W. Sarjeant, of Wellingborough, to Jane Eleanor, elder daughter of the late James Watson Kekwick, of Carlisle.

WEDD—DRAPER.—On Saturday, July 1st, at St. James', Kidbrooke, Blackheath, by the rector, the Rev. J. C. Leeke, Gilbert Wedd, M.A., M.B. Cantab, son of John Wedd, of Manchester and Wilmslow, to Bessie, daughter of George Draper, F.R.G.S., Blackheath, London.

DEATHS.

BENNETT.—On June 28th, at Beau Désert, Jersey, Brigade-Surgeon John Bennett, I.M.S., aged 59 years.

DAVIES.—On July 3rd, suddenly, at Caswell Bay Hotel, Mumbles, Swansea, Henry Naunton Davies, J.P., Surgeon, of Glyn Rhondda House, Porth, Rhondda Valley, South Wales, in his 72nd year.

FLOWER.—On July 1st, at his residence, Stanhope-gardens, Sir William Henry Flower, F.R.C.S. Eng., K.C.B., aged 67 years.

HEARD.—On July 1st, at Pentreve, Hunmanby, Yorkshire, Charles Goodridge Heard, Surgeon, aged 47 years, eldest surviving son of Edward Goodridge Heard, J.P., of Truro.

SWABY SMITH.—On July 2nd, at 124, Mill-lane, W. Hampstead, N.W., Dr. L. Swaby Smith, in his 65th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE SACRED PERSON OF THE MEDICAL MAN.

As we announced briefly last week two men were recently sent for trial at the Thames Police Court, on the charge of stealing from, and assaulting, a surgeon as he was emerging from a court after visiting a patient. To the public the story may appear as only an ordinary case of robbery with violence, examples of which take place weekly, almost daily, in the rougher quarters of great cities despite all police precautions; but to our readers the circumstances will mean a great deal more, for they signify a gross violation of the immunity from molestation usually enjoyed by the medical man in the roughest slums. There is no more impressive scene in fiction than that in which the medical man, respected because of his office, passes through the howling mob of an Irish court given over to a drunken scrimmage unscathed to his patient's side, and Kingsley in writing that chapter was describing facts, and facts to which many members of the medical profession can bear testimony. Has the spirit of the rough towards the medical man changed of late?

We hesitated to answer this question in the affirmative making a deduction from an isolated case when all history and tradition were solid in reporting that the medical man while engaged in his duty of serving man had nothing to fear from the violence or rapacity of man. But at a recent inquest on the body of a newly-born child at Poplar the grandmother of the deceased told the coroner that she sent for two doctors a little after midnight on Saturday last and that both refused to attend the case. Whereupon a medical man is reported to have said: "It is not to be wondered at that medical men in such a neighbourhood as mine refuse to go out late at night as there have been several premeditated assaults on members of the profession lately. Unless we know the people who send for us we won't go out at night." The witness then added that he had himself been threatened by roughs. This story makes it to our mind incontestable that in certain districts of London degraded men are ready to prey upon the class which of all others serves them best in their miserable lives. We cannot account for this curious fact, but so it is. The unwritten law that was wont to prevail among the lowest that the medical man should be allowed to go about his business unharmed has been repealed. As a result medical men in certain neighbourhoods cannot be expected trustfully to answer the midnight calls of strangers, for the risk that they are asked to take is no ordinary one. The mass of citizens who are sufficiently well-to-do in fact or appearance to be an object of robbery to footpads are not called by their business to places where such persons are encountered. A belated reveller or the facile victim of bad company may find himself late at night and far from the help of the police or respectable men in the clutches of the criminal, but instances of this situation are not common nor can the victim logically demand our warmest sympathy, as it is his pleasure and not his bounden duty that has got him into trouble.

But how different is the position of the medical man. It is his duty, a duty which he is proud to perform, to go into the foulest places with the foulest people alone and unquestioning at all hours. He cannot do his work unless he acts thus trustfully and promptly when his services are required, but unless he feels himself under the ægis of a general sentiment that his person is sacred the responsibility which he is asked to assume is too great, for to respond to the summons of deliberate garotters would be an act of suicide. For this reason we hope that any ruffians who are caught planning an assault upon a medical man by luring him into a position in which he can be robbed (and murdered if his objections to robbery prove strenuous) will be punished with exemplary severity. We do not request this out of any desire to make the medical profession a particularly sacred class, but because they share with the clergy the privilege of being at the beck and call of the wretched. Other people, as a rule, need not go where danger lies; to do so is the essence of the medical man's duty, and he ought not to be asked to risk his life whenever he performs his duty.

THE LYMPH OF THE NATIONAL VACCINE ESTABLISHMENT.

To the Editors of THE LANCET.

SIRS,—I shall be glad if any of your readers who are public vaccinators will kindly give in the columns of THE LANCET their experience of the "taking powers" of the lymph issued to them by the National Vaccine Establishment and also for any hints which they can offer to secure "four separate good-sized vesicles or groups of vesicles," &c. The first dozen or so of tubes sent me by the National Vaccine Establishment took well, leaving nothing to be desired, but lately I have had some failures and many cases where one or two small vesicles only have resulted. This, in my opinion, is worse than an absolute failure, for a second attempt to procure further vesicles, whether by National Vaccine Establishment lymph or lymph from a private source (which I have always had reason to rely upon as invariably successful), will hardly ever take if but one tiny vesicle results from the first vaccination. I cannot attribute my want of success to bad management, having now received the grant for successful vaccination three times running, or to any antiseptic method. I essay asepsis only and always succeed with other than National Vaccine Establishment lymph. I also wish to ask if a public vaccinator can register as successful any case in which but one vesicle takes regardless of its size? I am, Sirs, yours faithfully,

P.V.

"THE RELATIONS OF THE MEDICAL MAN TO HIS ASSISTANT: WHAT IS A PRIVILEGED COMMUNICATION?"

ETHICS AND PRIVILEGE.

To the Editors of THE LANCET.

SIRS,—There is a great moral law—the basis of all ethics—viz., "That we shall do to others as we would they should do to us." This principle THE LANCET has ever inculcated. In your comments on a recent action for slander (not libel, as you state) you take exception to the ruling of the learned judge on the question of privilege—what may and may not be a privileged communication between principal and assistant—and you conclude your remarks by saying that it will be the duty of the principal to tell the assistant *everything* that he may believe may help to guide in the treatment of the case. Up to a certain point I agree with you. Everything that may be necessary to guide him in the diagnosis and treatment, but when he considers it necessary in the diagnosis and treatment of the case to make slanderous and utterly unfounded statements, based on hearsay evidence alone, against the character and ability of a professional brother previously in attendance privilege cannot be pleaded in justification; the golden rule has been broken, the first principle of ethics violated.

It must not be forgotten that although the practitioner has a duty to perform to his patient he has also a duty to his fellow-man, and particularly to the dignified and noble profession of which he should be a worthy member, and that he can by no means better perform the one duty by ignoring the other.

I am, Sirs, yours faithfully,

July 4th, 1899. MEDICUS.

LADY DISPENSERS.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if your readers can inform me what chance there is for lady dispensers (Hall certificate) and at what salary. I am, Sirs, yours faithfully,

July 4th, 1899. J. S.

"WHAT IS ADVERTISING?"

To the Editors of THE LANCET.

SIRS,—"Fairplay's" amusing "cutting" is also extremely interesting just now when the question of professional advertising is so much to the front. It always seems to me that there is too much "straining of gnats and swallowing of camels" in this matter, or, in the other and equally applicable words, "one man may steal a horse whilst another may not look over a hedge." What, strictly speaking, is the difference between Dr. A or Dr. B stating in the columns of a newspaper that he is about to remove from No. 6 —— street to No. 24 —— road and Dr. C or Dr. D allowing his name to appear as physician to So-and-so's hydropathic or other establishment at some fashionable seaside resort or in the columns of a newspaper as connected with some hospital; or, again, that Dr. E has received some flattering appreciation of his professional services from his grateful patients? It is simply this: Dr. A or Dr. B are "unprofessional" advertisers, whilst Dr. C, Dr. D, and Dr. E are protected by the ægis of conventionality. But how are we to draw the line? Why should not all be equally tabooed?—I am, Sirs, your faithfully,

July 4th, 1899. M.R.C.S.

THE DRY SYSTEM OF SEWAGE DISPOSAL.

THIS is too frequently regarded in the light of a forlorn hope—in fact, the last refuge of those destitute of the means of disposal by water carriage. This view is largely the outcome of a want of a proper appreciation of the simple rules necessary to be observed in order to secure success. Our correspondent, "M.D.," whose letter we printed in THE LANCET of June 17th, 1899, p. 1683, asks advice under conditions which would seem to contain every element of success for the methods advocated by Dr. G. Vivian Poore in his brochure entitled "Rural Hygiene." In the case under consideration, where there is a colony of from 1500 or 2000 workmen living in huts, there would be present the necessary supervision to ensure success together with the labour available to furnish the small amount of attention requisite. There are two or three points to be held in view for any successful application of the dry method. (*a*) To prevent the soil from becoming sloppy, in which condition it is extremely offensive. (*b*) Its early removal on to the land. (*c*) Superficial burial, bacterial life decreasing rapidly downwards. Dr. G. V. Poore states that the first six inches of the earth are worth all that lies below for the purpose of rapid conversion of soil into humus. (*d*) Slop-water or urine can with far greater safety be thrown upon the surface of land, owing to the great abundance of bacterial life in the upper layer of earth, than if it is permitted to escape at a lower level where it has to depend almost entirely upon mechanical filtration for its purification. It is therefore evident that to collect a mass of soil and urine in a trench, or even in pails more or less

frequently emptied, would result in bringing such a system into discredit. Some extension of the dry catch illustrated in Dr. G. V. Poore's book would seem desirable in the present case. For the closets some such arrangement as the following might be constructed. Several long sheds might be formed, divided into closet compartments, the floor being raised upon framing some three feet from the ground, having a platform running along the front with steps for access at either end. The ground immediately under the closets should be raised a few inches to form a sloping bank towards the back of the closets—say, 12 inches by the riser in front of the seat to nine inches at the back. This bank might be of concrete, of burnt broken clay and cement, or clay beaten down to form an impervious bottom. Each closet should have a door at the back for access to the portion below the seat, where one or two shovelfuls of dry earth should be thrown each time after removal of the soil. The urine which would fall upon the impervious bottom would drain off into a trench some 12 inches wide and 12 inches deep dug close to the back of the range of closets. This trench should have about four inches of sawdust or loose earth at the bottom which would require changing every week or so, according to use. A large portion of the liquid falling into this trench would be evaporated. Some boards to form a kind of penthouse roof should be fixed to the closets above the access doors to prevent rain-water entering this trench. Daily the contents of these closet-catches should be shovelled into barrows and superficially dug or ploughed into the ground, a very few acres of which would suffice for the purpose, especially if the ground was cultivated. A shed should be built having an open front in which earth might be dried for use in the dry catch, but this should on no account be done with artificial heat. It is better to form urinals distinct from the closets, the troughs in which should be filled with sawdust or small pine shavings; this would also require renewal occasionally. The troughs should drain the filtrate into a small tank mounted on wheels which should be drawn away and the contents thrown daily upon the land. The actual amount collected, after allowing for evaporation, absorption, and the amount received in the closets, would not exceed possibly 100 gallons per 1000 men. Dr. G. V. Poore advocates that the sawdust be dried in a shed and used again and again. There is sure to be some smell from the ammonia given off in the process of disintegration, but otherwise this system will be found free from objection. If care is exercised as to the superficial burial of the soil and the slop water and urine is thrown upon the land little fear need be entertained as to the pollution of the well-water even though it be but a shallow well, always providing that the water can only find access to the latter through the bottom and that no surface water can pass down unfiltered against the outside of the well wall. The services of two or three men would carry out the scavenging necessary for a very large number with proper organisation. A reference to the report of the recent Commission undertaken by THE LANCET upon "The Disposal of Sewage and Water-Supply in Rural Districts" (published as a Supplement to THE LANCET of March 4th, 1899) might be found useful to our correspondent.

"THE LATE DR. G. F. CROOKE."

To the Editors of THE LANCET.

SIRS,—We thank you for your kindness in inserting our appeal on behalf of the widow and child of the late Dr. G. F. Crooke and we shall feel obliged if you will add the subjoined second list of contributors. Either of the undersigned or the treasurer, Dr. Arthur Foxwell, 22, Newhall-street, Birmingham, will gladly receive further donations from any who desire to express sympathy for the misfortunes of our late colleague.

We are, Sirs, yours faithfully,

GILBERT BARLING, 65, Edmund-street, Birmingham;
J. T. J. MORRISON, 3, Great Charles-street, Birmingham.
} Honorary Secretaries of the Fund.

July 4th, 1899.

	£	s.	d.
Dr. Peter Horrocks ...	10	10	0
Dr. H. Clifford Beale ...	5	5	0
Mr. T. F. Chavasse ...	5	5	0
Dr. J. H. Clayton	5	5	0
Mr. R. T. Kent	5	5	0
Dr. E. Malins	5	5	0
Dr. P. H. Pye-Smith, F.R.S.	5	5	0
Dr. E. Rickards	5	5	0
Dr. R. M. Simon	5	5	0
Dr. A. H. Carter	2	2	0
Dr. B. Jordan	2	2	0
Dr. G. H. Melson	2	2	0
Dr. Hale White	2	2	0
Anonymous	1	1	0
Dr. George Birt	1	1	0
Dr. C. P. Gallie	1	1	0
Dr. H. T. Griffiths... ...	1	1	0
W. M. K.	1	1	0
Dr. E. N. Nason	1	1	0
Dr. G. W. Powell	1	1	0
Mr. H. M. Simmonds ...	1	1	0
Mr. J. F. Williams ...	1	1	0

DIABETES AND EYE STRAIN.

To the Editors of THE LANCET.

SIRS,—I shall be grateful to any of your readers who will give me information about the theory which attributes diabetes to eye strain. I have at present under my care a young diabetic subject who was formerly a patient under the care of a Canadian physician. In a recent letter the former medical attendant says that he is about to read a paper on the subject of "Eye Strain as a Cause of Disease" before the Ophthalmological and Odontological Society of the United States. From this letter (to my patient's wife) and from my patient's statements I gather that his theory is that the diabetes in this case is of nervous origin, caused by stimulation of the medullary centre by conveyance from the nucleus of the irritated fifth nerve, such irritation being set up by "a state of tension" of the ocular muscles, either due to inherent weakness of one or other of them or to excessive action in cases of hypermetropia and astigmatism. This "state of tension" he endeavours to correct by suitable glasses, by prisms, and by tenotomy. He claims (to quote my patient) to have cured amongst others one extreme case of diabetes in a young girl. Although he advises dietary he does not insist on it. Both the theory and the practice arising therefrom are new to me and I shall be glad to be put on the track of any literature on the subject.

I am, Sirs, yours faithfully,

Llandudno, July 1st, 1899. EDWARD GOODDY, F.R.C.S. Eng.

P.S.—My patient himself believes that he was benefited by the treatment, but owing to business reasons he had to leave before he had undergone the full course.

"THE FUND FOR THE RELIEF OF THE WIDOW OF THE LATE MR. H. KINGSLEY HUNTER, L.S.A."

To the Editors of THE LANCET.

SIRS,—Kindly allow me to acknowledge the receipt of the undermentioned subscriptions, making a total of £103 17*s.* 9*d.*

I am, Sirs, yours faithfully,

RIVERS WILLSON, Treasurer.

42, Wellington-square, Oxford, July 4th, 1899.

	£	s.	d.
Dr. W. M. Crawford Watson	1	1	0
Mr. James Waghorn (Cape Colony)	1	0	0
Spiff	0	5	0
Mr. W. M. McMurtry ...	1	1	0
Sir Thomas Smith, Bart.	3	3	0

R. M.—The medical appointments in the gift of the Government are not numerous. Particulars concerning them will be found in the introductory part of the Medical Directory and in the current Students' Number of THE LANCET, p. 595. If our correspondent desires to know anything about a particular appointment he must specify his needs.

Medical Practitioner.—We are under the impression that the medical aid association in question employs canvassers as part of its regular routine, under which circumstances our correspondent's resignation should be persisted in (see The Battle of the Clubs, p. 160).

Uncertain cannot be recommended to pay forfeit and to break his agreement. Such a proceeding, though technically just, might lead to bad relations between the medical men in the place—a situation much to be avoided.

A Sufferer is recommended to disbelieve all the rubbish with which the dirty little pamphlet is stuffed and on no account to waste his money over the "remedies." Healthy occupation for mind and body is all that he requires.

G. P.—The public vaccinator is not intended to oust the private practitioner, but in the circumstances mentioned by our correspondent we do not quite understand what remedy is sought.

Mr. Rivers Willson.—Our correspondent speaks of letters "copies of which are enclosed." His communication contained no documents.

A Subscriber.—Opinions differ, but in our view the medical man should not give information.

Mr. T. Laffan.—We do not know.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 6th, 1899.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
June 30	29·96	S.W.	...	125	74	55	57	60	Cloudy
July 1	29·51	W.	0·55	117	70	60	59	60	Cloudy
,, 2	29·65	W.	0·02	111	66	53	55	60	Cloudy
,, 3	29·79	N.W.	0·03	92	65	56	56	58	Overcast
,, 4	30·04	N.W.	...	107	71	56	58	61	Cloudy
,, 5	30·19	WNW	...	117	77	55	56	60	Hazy
,, 6	30·21	N.W.	...	117	76	58	60	62	Hazy

During the week marked copies of the following newspapers have been received: *Morning Herald, Morecambe and Heysham Times, Macclesfield Chronicle, Warrington Observer, East Anglian Daily Times, Middlesex County Times, Sussex Daily News, Birmingham Daily Gazette, Nottingham Daily Guardian, Bradford Observer, Gloucester Journal, Scotsman, Newcastle Daily Chronicle, Bath Herald, Times of India, Pioneer Mail, Citizen, Builder, Architect, Western Morning News, Brighton Gazette, Liverpool Daily Post,*

Bristol Mercury, Manchester Evening Chronicle, Crewe Guardian, Yorkshire Post, Sanitary Record, City Press, Leeds Mercury, Cape Times, Surrey Advertiser, Local Government Chronicle, Reading Mercury, Local Government Journal, Hertfordshire Mercury, Mining Journal, Daily Graphic, Berkshire Chronicle, Preston Guardian, Public Health, Monmouth Beacon, Hereford Times, Worcester Journal, Halifax Courier, Daily Mail, Daily Chronicle, Bournemouth Guardian, St. Helens Reporter, Kettering Guardian, Midland Daily Telegraph, Northern Daily Telegraph, Home and Colonial Mail, Preston Herald, Lancashire Daily Post, Spalding Guardian, Pembroke County Guardian, &c., &c.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.).

WEDNESDAY (12th).—St. Bartholomew's (1.30 P.M.), University College, (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.).

THURSDAY (13th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.).

FRIDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.).

SATURDAY (15th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

THURSDAY (13th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Mr. C. Martin, Dr. H. Snow, Mr. B. Jessett, Mr. S. Keith, Mr. C. Ryall, and Dr. S. Sunderland. Papers:—Dr. L. Smith (Montreal): The Prevention of Hernia after Abdominal Section.—Mr. C. Ward (Pietermaritzburg): Description of Transfixors.

SOCIETY FOR THE STUDY OF INEBRIETY (Medical Society's Rooms, 11, Chandos-staeet, Cavendish-square, W.).—4 P.M. Quarterly Meeting. Prof. S. Woodhead: Heredity.—The Rev. Canon Barker will move a vote of condolence on the death of the late President, Dr. Norman Kerr.—Dr. Morton and Dr. A. Reid will move a resolution for the appointment of a committee to investigate the conditions under which the tendency to inebriety is capable of transmission to offspring.

FRIDAY (14th).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, Hammersmith, W.).—5 P.M. Annual General Meeting. Annual Report. Election of Officers and Council.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (10th).—WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. H. P. Dunn: Wounds of the Ciliary Region and their Treatment.

TUESDAY (11th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. M. Gunn: Ocular Paralyses.

WEDNESDAY (12th).—MEDICAL GRADUATE COLLEGE (22, Chenies-street).—6 P.M. Dr. H. Tilley: Demonstration of Selected Cases (Throat and Nose Diseases).

THURSDAY (13th).—THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Penrose: Demonstration of Selected Cases.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. McAdam Eccles: The Differential Diagnosis of Scrotal Swellings.

EDITORIAL NOTICES.

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Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

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We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. I. of 1899, which was completed with the issue of June 24th, and the Title-page to the Volume, were given in THE LANCET of July 1st.

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[*See also pages 28 & 29.*

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IODOFORM-VASOGEN, 3%.

IODOFORM dissolved in VASOGEN is more efficacious than Iodoform as usually applied, and is better adapted for injections.

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Meeting held in Edinburgh this year, is guaranteed to be a perfectly pure Extract made from Malted Barley only. The grain used is chosen with the greatest possible care; and as The Distillers Co., Ltd., purchased over **400,000 quarters** during last year, it must be apparent that their knowledge is exceptional. Malting is conducted entirely on their own premises, the machinery employed is of the most perfect description, and every lot made is carefully tested before being bottled.

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BROMO SODA.—My attention has been called to your recent preparation entitled "Bromo Soda." It was, I believe, first prepared by you partly at my suggestion. It consists of the Bromide of Sodium and the Hydrobromate of Caffeine, in the proportion of thirty to one. It is designated, as I understand, not only to allay nervousness, but by means of the combination of the Caffeine with the Bromide to counteract the depressing effect of the latter. I have carefully considered the separate and combined effects of these drugs, and can, as I do, heartily commend the preparation you have made and offer for the use of the medical profession. After a long and careful experience with the various Bromides in the treatment of those affections of the nervous system that embrace unhealthily exalted reflex excitability, and in general nervousness, I have arrived firmly at the conclusion that the Bromide of Sodium is as valuable as any member of its class *as a Bromide*, and is greatly preferred, as compared with the Bromide of Potassium, on account of the greater toxic or poisonous effect of Potassium salts upon the human organism, as compared with those in which sodium is the base. In the vast majority of cases in which the Bromides are used the vigour of nutrition is lowered. It is, therefore, a matter of very considerable consequence to select that particular member of this important group of therapeutic agents which, while it secures the depressing or quieting effect desired, nevertheless exercises in the way of pernicious influence the least on the vigor of nutrition, or in other words the reparative power of the body. I am thoroughly clear in my mind that the Bromide of Sodium should be substituted for the more commonly, and as I may say almost universally, employed Bromide of Potassium. I feel so strongly in this matter that I am more than willing to make this the occasion for stating clearly and at length my views, with the hope that for the benefit of the vast mass of nervous invalids, for whom these agents are prescribed, they may have the slight but decisive advantage that will result from the proposed change. If you shall be able to exert a favourable influence in effecting this through the manifold channels at your disposal, the change I feel certain ought to be made, you will confer a boon of no small degree upon nervous invalids.

Most respectfully yours,

To Messrs. WM. R. WARNER & Co. J. S. JEWELL, M.D.

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℞ Acid. Salicylic. (Schering's),	gram. 0·32	Potass. Iodid.	gram. 0·09
Cimicifuga, ...	gram. 0·10	Tr. Gelsemium, ...	0·06

Indicated in RHEUMATISM, GOUT, LUMBAGO, &c.

This preparation is especially valuable for rheumatic diathesis and in the treatment of acute inflammatory, subacute, and chronic rheumatism, any of which will yield to tablespoonful doses every three or four hours, until four doses are taken; then a dessertspoonful at a time and finally decreased to a teaspoonful every three or four hours.

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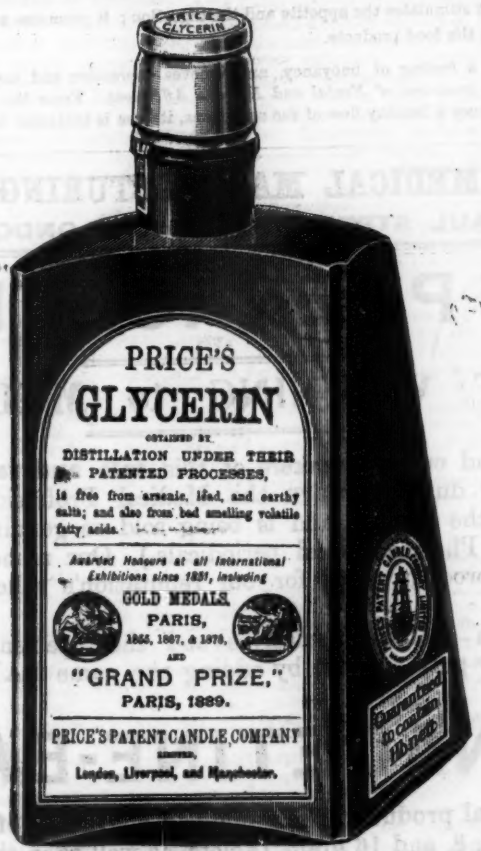

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